

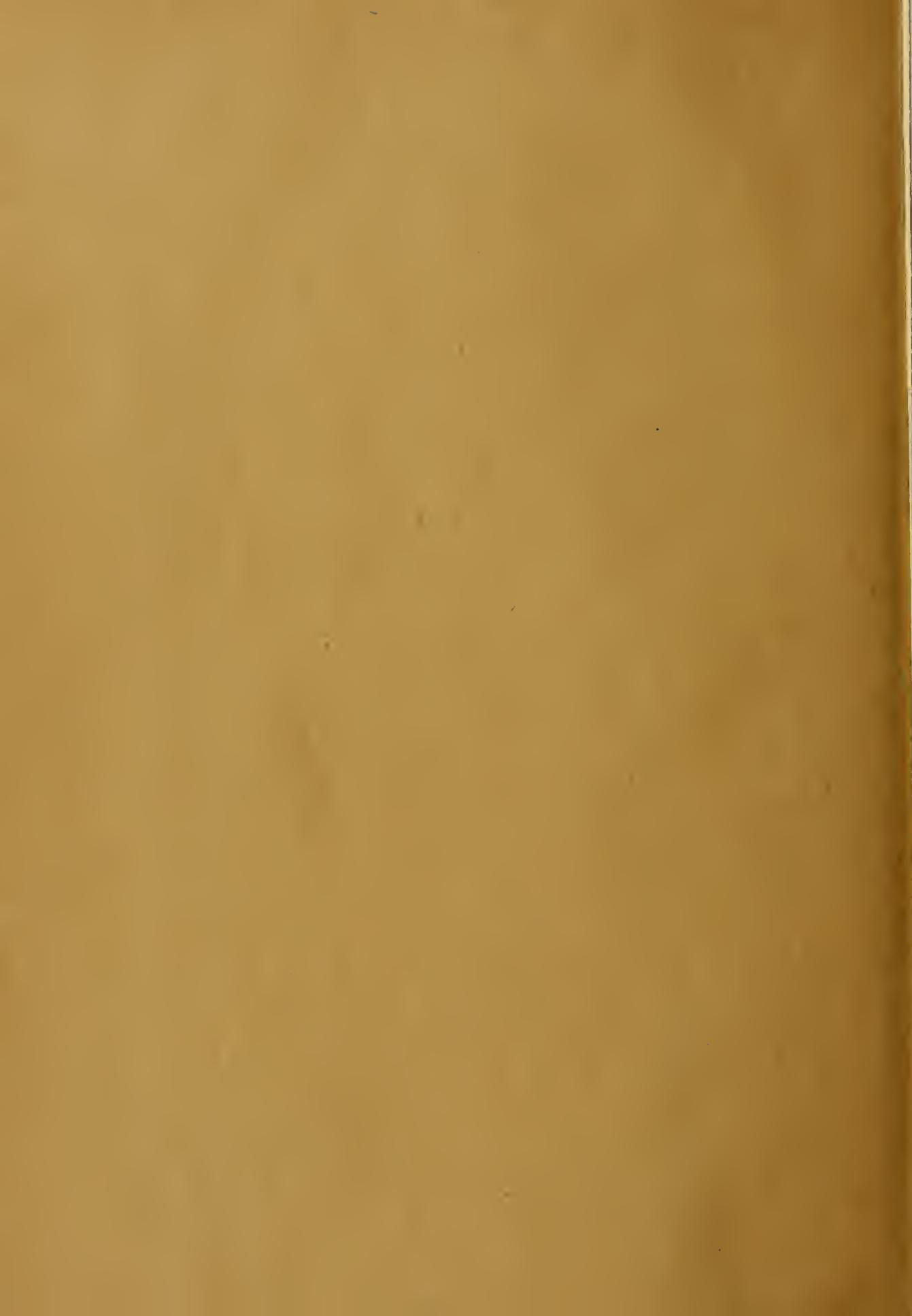
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THE JOURNAL

OF THE

INDIANA STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

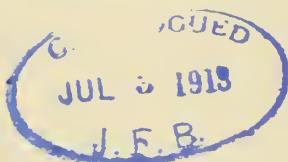
ISSUED MONTHLY

UNDER DIRECTION OF THE COUNCIL

ALBERT E. BULSON, Jr., B.S., M.D. Editor and Manager BEN PERLEY WEAVER, B.S., M.D., Ass't Editor

OFFICE OF PUBLICATION:
219 W. Wayne Street, - - - FORT WAYNE, IND.

INDEX TO VOLUME II
JANUARY TO DECEMBER, 1909





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VOLUME II.

JANUARY 15, 1909.

NUMBER 1

ORIGINAL ARTICLES

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.
MUNCIE, IND.

It was with some misgiving that I consented to write a series of articles upon the above-named subject. So much time, research and care is required that I hesitated. However, I have made the attempt and will try to produce articles that contain historical facts and reminiscences of interest, and yet I am conscious that I may make some mistakes and many omissions. I make no claim to perfection.

I feel justified in reproducing extended extracts from some of the earlier volumes of the Transactions of the Indiana State Medical Society. I think this is advisable, for the reason that the papers were contributed more than one-third of a century ago, few copies of the Transactions are extant and these not easy of access, and, further, that the information there imparted is valuable and should be reproduced for younger medical men of the present day. I have the only file of these papers in Delaware County, and I suspect that a search of the various counties in the state will show but few copies. This is my apology for reproducing in part these interesting and valuable contributions.

I shall only mention in detail the work of members of our profession who have passed away. Their work is completed, and yet I must necessarily be brief in all that I may say concerning individuals and what they accomplished.

The profession of this state, and indeed the entire country, owes a vast debt of gratitude to the men who have so efficiently conducted our Indiana medical journals, wherein is recorded so

much of our medical history. Dr. Parvin was our pioneer in medical journalism—starting the *Western Journal of Medicine* in 1866. Four years later this journal was succeeded by the *Indiana Journal of Medicine*, and in 1882 it was named *Indiana Medical Journal*. It has continued under that name to the present. Dr. A. W. Brayton especially deserves praise for the labor and time he has given to the *Indiana Medical Journal*. I have consulted files of this journal from its beginning to the present time and have been impressed with the vast amount of historical matter he has furnished the profession of this state. Dr. Frank C. Ferguson also was an efficient editor in the early days of medical journalism. Dr. S. E. Earp, in a shorter period of time, has rendered good service in *The Monitor*. Our venerable friend, W. H. Wishard, with his wonderful memory of nearly three-quarters of a century, and a pen that records so interestingly, has given us a vast fund of information in journals and State Transactions. Dr. R. French Stone, in his work, "Biography of Eminent American Physicians and Surgeons," has done justice to Indiana physicians. Good work in furnishing facts of medical history has been rendered by numerous other physicians, but I can not mention all at this time.

Much of the very early medical history of Indiana is found in an article by Alfred Patton, M.D. (Transactions of the Indiana State Medical Society, 1874), entitled "The Medical History of Vincennes," which is worthy of reproduction.

THE MEDICAL HISTORY OF VINCENNES.

"It is supposed that Vincennes was settled by the French, from Canada, in 1710 or 1711, and that a priest, Father Mermet, was stationed here soon after that time. The place was called 'Au Post du Onabadee,' which has since been cor-

rupted into the Old Post. In 1732 Francois Morgan de Vincenne was made commandant of the post, and the place was then called St. Vincennes. I have carefully read everything in history relating to this ancient city, and do not find the name of a single physician referred to, and only twice do I find any mention of diseases. An epidemic prevailed here soon after Father Mermet came to the place, which took off more than half of the inhabitants. The medicine man of the Indian tribes, in vain, invoked the aid of the great Manitou for the relief of the sick, but, as might have been expected, superstition and ridiculous incantation failed to arrest the progress of that terrible disease, smallpox. History informs us that the same disease prevailed here in 1793; about seventy-five deaths then occurred.

"The first physician who practiced medicine in this place, so far as we are informed, either from records or the old citizens, was Dr. Elijah Tisdale, who located here in the latter part of the year 1792, where he died. He was an assistant surgeon in the United States army. Hon. Charles B. Lusdle has in his possession the original commissions, signed by George Washington, President of the United States, and dated at Philadelphia, March 4, 1791. Mrs. R. H. Domonon has a copy, which I have seen. By an examination of the Army Register of the Medical Department, I find that he was assigned to duty with the Second Regiment, U. S. Infantry. From old papers and letters which belonged to Dr. Tisdale, some of which were written by him, I learn that he came to this place with the regiment in 1792, and resigned his office in 1796. I am unable to procure any information as to his medical education, but from his having received the appointment of army surgeon, and as there was then a board of four examiners, as now, it is to be supposed that he was a well-informed physician. An additional evidence in favor of this supposition is the character of the medical books he relied on. Though I have not been able to find any of his books, I learn from one of his letters that he owned Cullen's Practice of Medicine, which he obtained in 1795, Bell's Surgery, and Hamilton's Obstetrics. These were standard works at that early day; indeed, but few American physicians then owned Cullen's Practice, as it was published in London in 1789, and was not republished in this country until 1806. Then, guided by the books he read, and the manuscripts he left, to which I have had access, I will be enabled to commence the medical history of Vincennes, with his location here in 1792.

"The next physician who made Vincennes his home was Dr. Samuel McKee, Jr., who was also

an army surgeon. His commission, the original of which is before me, is signed by Thomas Jefferson, President of the United States, and dated April 27, 1802; but I find from the Medical Register that he was assigned to duty here, as garrison assistant surgeon, in March, 1802, and from the same source I ascertain that he died here Nov. 5, 1809. His son, A. B. McKee, who lives on a farm near this city, has kindly furnished me with his father's old medical library, which is of great value in writing this history.

"Dr. McKee was educated at the Transylvania University, Lexington, Ky., and was college librarian for a considerable time. It is said of him that he read every book in the library. He was a Greek and Latin scholar and well read in his profession. As the books he read were the same as those relied on by others of the early physicians, I will include all together in that branch of my subject.

"Dr. Jacob Key Kendall came here in 1805 from Virginia, and died in 1833, having practiced here twenty-eight years. He was an able and popular physician. I now own his medical library.

"Dr. Elias McNamee came here in 1808 from Pennsylvania and died in 1834. His daughter, Mrs. Woolverton, resides here at present. Her husband was Dr. J. D. Woolverton, who located here in 1818 and died in 1834.

"Dr. Wm. Carr Lane located here in 1812; removed to St. Louis in 1815, where he attained wealth and distinction. I have quite a number of his old books.

"Dr. Alison came here in 1817 and died in 1820.

"Dr. L. S. Shuler came here in 1818 and died soon after.

"Dr. E. Skull came here in 1811 and left in 1813. He fought a duel with Mr. Ranneniss Becker, which resulted in the death of Mr. Becker. Dr. Skull left suddenly. He was an acting surgeon in the army, but his name does not appear in the Register. I, therefore, suppose he was not regularly commissioned.

"Dr. Hiram Decker was born and raised in this county, and began the practice of medicine in this town in 1815; died in 1863, having been actively engaged in the practice forty-eight years. He enjoyed the confidence of a large circle of friends, and was a warm, personal friend of General Harrison, who appointed him land agent for this district when he became President of the United States. I have his entire medical library.

"Dr. Joseph Somes came here in 1828 from England; removed to Leavenworth, Kans., in

1872. He practiced here forty-four years; was a well-educated and courteous practitioner.

"Dr. W. W. Hitt came here from Baltimore in 1829; practiced until 1872, and retired from practice the day he reached his fiftieth year in the medical service. From him I have derived much valuable information in regard to the early medical history of Vincennes. For many years of his early practice here he was called on to visit patients fifty and sixty miles distant. was often called to Mt. Carmel, Terre Haute and other distant points. He performed an important surgical operation, an account of which was given in the *Western Journal of Medical and Physical Science*, in 1832, article 2, page 350, 'History of a Sarcomatous Tumor—Its Extirpation,' published by request of the Medical Bureau of the First Medical District of Indiana. By Washington W. Hitt, M.D., of Vincennes, Ind.: 'The tumor measured, in its largest circumference, thirty-two inches, and its base twenty-two inches. It involved the left mammary gland. The age of the patient was 24 years. She is still living, the tumor never having returned.'

"Dr. Hitt was a member of the constitutional convention in the winter of 1850 and 1851; was elected on the temperance ticket. He long enjoyed the confidence of the people as a physician and has ever been held in high esteem as a citizen. His age is now 73.

"Dr. Davidson came here in 1830; died in 1833.

"Dr. J. Browne, in 1834, and died in 1836.

"Dr. John Baty came here from France in 1836; left here in 1866; is now living at Terre Haute, and is physician and surgeon to the Sisters' Hospital at that city. He attained distinction here as a physician, and especially as a surgeon. He graduated in Paris, France, taking the fourth honor, which entitles him to a position in the Medical School of Paris, but he prefers to practice his profession in free America to enjoying the high honor of a great medical school in the metropolis of France. He spent two or three years in the schools and hospitals of Paris during and since the Franco-Prussian war. On account of his superior attainments in medicine and surgery, his learning and high moral qualities, I think he deserves a special notice in this report. While here he performed many important surgical operations and enjoyed the full confidence of a large circle of friends and acquaintances. His age is 62.

"Dr. John R. Mantle came here from the State of New York in 1844; is still engaged in the practice of medicine; is doing a remunerative practice and stands high professionally and socially. He spent some time in New York City, last year, prosecuting the study of his profession in the hospitals, giving special attention to diseases of women and obstetrics. His age is 84.

"Dr. H. M. Smith located in this city in 1849; is a native of Kentucky; was postmaster in this place eight years; was appointed by President Lincoln; is still engaged in the practice and enjoys the confidence of many of our best citizens. He is 53 years of age.

"Dr. R. B. Jessup came here from New York State in 1853; is still engaged in the practice; directs special attention to surgery, in which he has attained a well-merited distinction. He was a surgeon in the United States Army during the late war.

MEDICAL SOCIETIES OF VINCENNES.

"The first medical society organized in Vincennes was under a charter granted by the state legislature in the year 1835. This society had the authority to give diplomas to those who submitted to a satisfactory examination by a board of medical censors, which, in that early day, was regarded with almost as much favor as a diploma from a medical college. The meetings of the society were held quarterly and were attended by physicians from this and adjoining counties. A copy of the constitution and by-laws accompany this report. Sections 19 and 20 are worthy attention and are herewith transcribed:

"Sec. 19. Physicians should never neglect an opportunity of fortifying and promoting the good resolutions of patients suffering under the bad effects of intemperance and vicious lives; and, in order that their counsel and remonstrations may have due weight, it will readily be seen that they should have full claim to be blameless in life and high moral character, which we have stated to be a necessary prerequisite to an honorable stand in the profession."

"Sec. 20. Medical men should remember the 'Sabbath day and keep it holy,' and visits should, as far as consistent with professional engagements, be made before or after public worship, or during its intervals."

"I am pleased to be able to state that out of the entire number of physicians who have lived in this place, or who are here now, there has not been an inebriate, and nearly all have been moral men, and many of them members of churches. The physicians here at present are all members of some church, with one or two exceptions, and not one of them that does not discourage intemperance both by precept and example.

"The next medical society that was organized here dates in December, 1863, with Dr. W. W. Hitt, president, and Dr. A. Patton, secretary. Its meetings were held monthly, and for a year or two they were well attended and the interest fully maintained, but suddenly they were discontinued and for several years there has been no meeting.

THE MEDICAL DEPARTMENT OF THE VINCENNES UNIVERSITY.

"The legislature of the Territory of Indiana granted a charter for the Vincennes University in 1807, with the privilege of uniting a medical department with its course of instruction; also law and theological departments. The school of learning is still in existence, having received an endowment from Congress, but the medical department has never been organized.

FEE BILLS.

"I have before me one of Dr. Tisdale's bills, which indicates that he charged for a visit in town, medicine and prescription, \$2.00; bleeding, 50 cents; 2 doses jalap, 50 cents; 6 pills, 25 cents; 4 pectoral powders, \$1.00." I regret that the bill does not include a greater variety of items.

"Dr. McKee's charges in 1805 were, for a visit in town, \$1.50, medicines additional; extracting teeth, 25 cents; for 30 cathartic pills he charged 50 cents; for one dose of calomel, 1 oz. paregoric and vial, 62½ cents; for 1 dose calomel and 1 dose tartar emetic, 50 cents; for 20 mercurial pills, \$1.50; accouchement cases, natural, \$5.00. I derive this information from a bill made out against one of his patients.

"Doctors Key Kendall and Decker, in 1820, charged one dollar a visit in town, and charged much less for medicines than did Drs. McKee and Tisdale, the price of drugs having greatly decreased.

"In 1835 I find the following charges as being agreed upon by the physicians, but, as they are the same as those of 1838-48, I will not transcribe them. I find one difference in 1835, the charge on prescription, with written advice, was from \$5 to \$15.

"In 1848 a fee bill was published from which I extract the following: Visit in town, \$1.00; with unusual detention, \$2.00; prescriptions, with letters of advice, \$5.00 to \$10.00; consultations, \$3.00 to \$5.00; night visits double; vaccination, 50 cents to \$1.00; venesection, 50 cents; simple medicines, per dose, 25 cents; mixtures, 25 cents per fluid oz.; blisters, from 25 to 50 cents; accouchement, \$5.00 to \$10.00.

EMOLUMENTS.

"The physicians who have labored so faithfully and so long for the people of Vincennes may have gained honors and the grateful remembrance of friends, but not one has ever accumulated wealth; none have made more than a living, with the exception of three, and their fortunes, amounting to only a few thousand dollars, were the result of careful, economizing, fortunate investments and small families. It seems that medicine, though an honorable profession, is not a lucrative one, especially in small towns or the country."

(To be continued)

A PLEA FOR THE USE OF NATIONAL FORMULARY AND PHARMACOPEIA PREPARATIONS.*

FRANK H. CARTER, M.D.
INDIANAPOLIS.

The prescribing of regular remedies seems to the writer a thing desirable to all parties interested except one. The exception is the manufacturer or exploiter of specialties. When I say "manufacturer" or "exploiter," it refers to those who make and market large lines of pharmaceuticals, with certain specialties on the side, as well as the firm which confines its efforts to one, two or three high-priced and fancy-named specialties.

The congress of well-known and painstaking physicians and pharmacists have provided us with material for the treatment of disease which the

*Read before the Indiana State Medical Association at French Lick, June 19, 1908.

pharmacist is prepared to dispense on the order of a physician. These remedies have not been discovered in a dream or by an Indian squaw, or even by a philanthropist, but are the tried and proved products of hard-headed and practical chemists and botanists.

Unfortunately, we have for many years drifted farther and farther out on the sea of—dare I say experiment, or has it been one of the exigencies of modern life? Druggists as well as physicians have been caught in this current and have apparently vied with each other as to who could place on the market the greatest variety of “sure cures” for everything, and all in one bottle. There is surely a change taking place all over the country, as meetings of this kind clearly indicate. The medical associations and pharmaceutical bodies are taking up the subject with gratifying results, and we get reports through the medical and drug journals of fraternal meetings to consider ways and means to get nearer together for mutual improvement and advancement.

My statement as to the desirability of such action I will touch upon briefly. The physician is in closer touch with his patient when he writes a prescription combining several remedies requiring the skill of a compounder than he is when the article called for has the name blown in the bottle or on the cork. His patient almost invariably gets a lower price and the druggist is remunerated for his ability and skill as a dispenser, and not as a mere merchant. The handing out of ready-made proprietaries is largely responsible for the self-medication of the public and the cut-rate evil which is the curse and disgrace of the pharmaceutical world. The patient who is told offhand to get a dime's worth of this or a bottle of that very soon thinks lightly of the advice which costs him nothing, and is very easily led by the recommendations he sees in print to ignore the physician in his future needs. Or, on the other hand, if a prescription for a proprietary is written, and the druggist has charged him \$1 for a preparation which has cost him 67 to 75 cents, and in some cases 79 cents, he brings the telephone into use to abuse the doctor who has charged him \$1 to \$2 for advice and the druggist \$1 for fuel, when he could have bought from a “cutter” for 74 to 85 cents.

A careful investigation of a file, covering 500 prescriptions, shows that the average price to the patient, when specialties or proprietaries were prescribed, either wholly or in part, was 58 cents, and the cost to the patient for preparations compounded by the druggist was 38 cents. The profits to the druggist, it is unnecessary to say, were much more satisfactory than when he

simply drew corks and wrote labels. Of the 500, 183 were specials and 317 were not of that class.

The shelves of every drug store in city and country which has tried by all fair means to maintain and increase its prescription business, will be found to contain hundreds of bottles and packages from which, in many instances not more than one-fourth of the contents have been used. This means two things: the patient has paid too much for his medicine and the pharmacist has lost money—yes, I say, lost money—by putting it up, for many of these packages represent an investment of from 75 cents to \$1.50, and the case is rare where the amount received covers original cost, saying nothing of the needless delay to the sick and the wear and tear on the pharmacist, who probably has telephoned all the jobbers and everybody he knew in the retail trade before being able to obtain an article which he already had, but which must be put out by a different firm, under a different name and coloring. Shelf after shelf has been added and filled, and the harassed druggist wonders where it will land him—in the bankrupt court or insane hospital. Liquid, powder and tablet digestives, some of which are claimed to control all the known and unknown ferments; liquids and tablet antiseptic germ killer of wonderful names, colors and special shapes; dozens of iron compounds, uterine tonics and sedatives in countless numbers; hypnotics, sedatives, diuretics, stimulants, etc., etc., without end, and every third prescription something new or so rarely prescribed that it is forgotten in the general confusion. Is it any wonder that many times the statement is made that the prescription trade is not worth catering to, and pharmacists all over the country are found backing up all kinds of nostrums with their personal guarantees and offers to return the money if they do not cure?

Now, gentlemen, I am going to touch on a subject which seems to me should be brought forward, and that is, the stock company. Druggists have been accused of being commercial and of doing counter prescribing, and many other unprofessional things. Unfortunately, there is much truth in the charge, but I believe the personal interest in the product of a manufacturing plant by physicians is going to put another nail in our coffins if it is not headed off. This is a comparatively new industry which has spread over the country. Merchants of all kinds, in times past and present, have been invited, importuned, cajoled, and sometimes threatened to enter stock companies, making and marketing the goods they were selling over their counters, but the extension of the practice to professional men

seems to have been of recent origin, or at least to have taken a more aggressive step. Shrewd ex-druggists and druggists, physicians and good business men are behind the plans, and, however plausible the argument, is it good ethics to endorse them? Can not we make a living in our business or profession without the smell of smoke on our garments? Day after day specialties are presented, and the druggist is informed that physicians are stockholders and will prescribe them. Is he a physician, the attendant on the afflicted, or a commercial man—one who is buying and selling merchandise, and on each sale garnering a few pennies on top of the dollars he gets for his advice?

In the upheaval going on all over our country, there is the evidence of a desire to get back to safer ground in all of our material affairs, and we, a body of men who are looked up to for high attainments and ideals, are surely due for a housecleaning. The druggist should avoid counter prescribing and booming of patent and proprietary articles, and the physician should back him up by using ethical remedies and avoid the dispensing, except in emergencies.

The writer does not consider it his province to call names or specify pharmacopeia or formulary preparations for your use, feeling that this phase of the question will and can be brought out by discussion and by future papers submitted to this body. He has tried to handle in a brief way and from an everyday and practical manner a few of the thoughts suggested by the title of the paper.

DISCUSSION.

H. E. Zimmer, Indianapolis.—In attempting to discuss this matter to-day I find myself in a very embarrassing situation, for I confess I am on both sides of this question. As I glance over this gathering I am sure some of you recognize me as the astute, smiling and ethical Dr. Jekyll advocating the use of N. F. and U. S. P. preparations, while others of you know me as the cunning and avaricious Mr. Hyde extolling the virtues of my own proprietary remedies, of which I have several. But after all, druggists are used to difficult positions, for their whole lives are made up chiefly of difficulties, and in this instance I am comforted by the story of a young man who lived in a certain village and who became very wild and dissipated. Every effort was made by his family and friends to reform him, without avail, and finally the preacher made an effort to arrest him in his downward course, and as a climax to his appeal he said, "Why, my son,

we don't know where you will go when you die." The youth replied, "Parson, it don't make a bit of difference. I have friends in both places." And so have I friends in both places—friends in the heaven of N. F. and U. S. P. preparations, and friends in the hades of proprietary remedies. And so I do not understand what is meant by these articles that are appearing in both medical and pharmaceutical journals from time to time telling of the ever widening breach between physicians and druggists. Physicians have always been my friends, and whatever of success I may have attained is largely due to that friendship.

While I am not one of those who consider a thing sacred because it is in the N. F. or U. S. P., the more I study these books and learn their value the more I wonder how it was possible for the proprietary business to assume such vast proportions as it has. In 1905, the last estimate I was able to find, the proprietary business amounted to \$75,000,000 in that year, and M. L. Wilbert, a druggist, in an address to such a meeting as this in Philadelphia recently, said, "Here are two drugs, castor oil and phenol phthalein, which in various forms are advertised under seventy different names in all parts of the world and at all sorts of prices," so that after all when a new proprietary is launched it is not so much a question of new drugs, but a new name and vehicle for old ones. My colleagues have evaded one very important phase of this matter, or possibly they have left it for me. In either case I am obliged to them, for I shall not shirk the responsibility of presenting it. It is this: Who is largely to blame for the growth of this proprietary business but the druggists themselves, filling their stores with tables and chairs that they may serve light lunches, sandwiches and cake and pies, if you please, soda water and pretzels, and in some places I am told that upon giving the proper signal the accompaniment of pretzels may also be obtained. An appropriate motto for us druggists nowadays would seem to be "everything but drugs." As a matter of fact we have neglected the drug part of our business, and physicians were in many instances compelled to dispense ready-to-use medicines or prescribe proprietaries, as it was impossible in many localities to obtain satisfactory service from the limited stock of drugs so often found.

Another important feature in the sale of proprietaries is the detail man. Most of us, even doctors, will fall under the spell of a heart-to-heart talk. Now, the detail man is a heart-to-heart talker par excellence, often a physician himself (having quit the practice on account of

his health?). He at once tells you of 349 cures of persistent enema that came under his personal observation while at the clinic of Prof. Dr. Rhine-wine, of Berlin. These patients were put on fluid extract Tang Kui (Sehan Ki) Merck, and after eight weeks all but 19 recovered completely. After some further experimenting he discovered a sulphanilic ester of something or other added to the above, cured the rest, and this was the remedy he was introducing. And why should you not try it? Presented by a firm of well known commercial integrity, offered by a physician who had seen results from it, advertised in your medical journal, and your own druggist is one of the agents in this territory and plenty of samples were left you, why not try it? It certainly comes well endorsed. Suppose no one had ever tried antitoxin or phenacetin.

But we are hopeful for better things. A rainbow has appeared in our clouded sky. The N. F. and U. S. P. are the guide-boards pointing in one direction to medical and ethical satisfaction, and in the other to a pot of gold, though I am not so sure but that this N. F. rainbow has a dark side. It is this: If physicians write for U. S. P. and N. F. preparations, druggists will hail the innovation with delight, but if they specify that these preparations shall be made by some special firm it will plunge us into a condition far worse than we are now in, for instead of having, as Mr. Carter suggested, a few proprietary remedies to contend with, we shall be compelled to keep five or six brands of each remedy in the N. F. and U. S. P. The manufacturing pharmacist is not going out of business on account of this effort—not right away. The greatest difficulty, however, in the way of popularizing the N. F. and U. S. P. products will be habit. For instance, you desire to prescribe a hypnotic or sedative and you have been in the habit of using bromidia and with good results. But you remember that the N. F. has a similar preparation, but its name you can not recall, and certainly you can not be much blamed, for it is disguised under the title *mistura chlorali et potassii bromidii compositæ*, N. F. 3; consequently bromidia will get the business. I know the defense of this name is that it is a descriptive title, but I am sure it will take patient and long-enduring effort on the part of physicians to form these new habits of prescribing. I hold in my hand a little pamphlet which I call the detail man of the N. A. R. D., a copy of which may be had for the asking, which may help you in the selection of N. F. and U. S. P. preparations not substitutes for proprietaries, but remedies of known composition, and reasonable price. The

booklet is indexed in such a manner that even if you can remember the proprietary name only you may readily find the N. F. or U. S. P. equivalent. For instance, if you desire to prescribe lysol, you find from the index that the equivalent of lysol is given on page 15, and it is called liquor cresolis comp., or if listerine is wanted the equivalent is given on page 14 as liquor antisepticus, or glyco thymoline as liq. anticepticus alk.

Do you ask how this will be profitable to you? Well, it will be cheaper for your patient, and most of us deal where we think we get the worth of our money, even when we employ a physician.

If I have not already exceeded my allotted time I should like to tell a story that illustrates my position with regard to this whole matter. A prominent Republican politician of Indianapolis became a convert to Mr. Bryan's ideas the first time he was a candidate, and made speeches denouncing the Republican party. "Why," he said, "the Republican party are grafters. I have known for twenty years that they have been robbing the people." At the conclusion of his speech a farmer friend said to the politician: "I have lost confidence in you; if you knew these things twenty years ago why didn't you tell about them?" To apply the story to myself, I have known these things a good many years, but it never occurred to me that you wanted to be told about them until you asked me to speak here to-day.

However much my colleagues may disagree with me, on one thing I am sure we can all unite. We are making history here to-day. Such meetings as this are being held in every part of our country, and I am pleased to think that maybe this is the first step toward the elevation of the drug business into a profession. We all know it needs elevating, and we trust you will never deny us a helping hand.

Dr. J. M. Anders, Philadelphia.—This subject is one of great practical interest and importance. I am with those who believe that the druggists and the physicians should have a perfect understanding between them, and I can not see the slightest reason for either to doubt the motive or the acts of the other. On the other hand, I believe that getting together, as you have to-day, and as we have in the past in Philadelphia, in discussing these questions and agreeing to cooperate, that everywhere it must render the soil favorable for development and improvement in both scientific pharmacy and therapeutics. In Philadelphia we have had at least two meetings between the druggists and practitioners of the county. While too early to predict, I feel

quite sure that the fruitage will be all that the most enthusiastic among us could hope for. There certainly has been stated here to-day a great reason why there should be the greatest harmony between the pharmacist and the physician, and more especially for the sake of discussing these questions of mutual interest and importance. There should be a very careful definition of the sphere of activity of both professions and there should be no over-lapping and no misunderstanding as the result of trespassing upon one another's spheres or provinces. It has been stated that the medical profession is largely, perhaps not all, in a debauched condition, if I may use that term in speaking of the medical profession in recent times. And in the meantime the nostrum vendors have been taking their patrons from all classes—from the general practitioner and from the college practitioner as well. And certain members of the profession have been accused of having forsaken the standard medicines for unethical proprietaries and even various nostrums. On the other hand, there are those who, it has been claimed, were not practicing what they were preaching. I think this is a question which is being very seriously considered in many parts of the country at the present day. I believe it is a reconstructive movement on these lines that can not and will not be ignored until finally, reasonably and amicably adjusted. I am not one of those who think that every good thing and every remedy that we prescribe must necessarily be a part of the United States Pharmacopeia or the National Formulary. I am quite convinced that there are a few scientific products that are approved by the medical profession, and many of these will doubtless find their way into the United States Pharmacopeia, but I do hope the time has come when we shall draw the line sharply between the unethical proprietaries and the few scientific products generally employed. I took the trouble not long ago to examine the catalogue of 144 regular medical colleges of the United States and to my surprise I found not more than sixteen recommending the use of the United States Pharmacopeia, while only one mentioned the National Formulary. I think this work is both educational and organizational and I believe meetings of this sort between pharmacists and physicians can not fail of being followed by the most important results.

Dr. Holmes, Terre Haute.—It would be an excellent plan if every one would have the booklets, the Manual of the United States Pharmacopeia and National Formula, which also explains things about the duty of the American Pharmaceutical Society, the propaganda for reform and the non-

official remedies published by the American Medical Association. Another way we could help would be in refusing to accept samples from the detail man of things not approved by the association. We should either stand by the Council or vote for a new Council. I suppose all of us have had the experience of prescribing a National Formulary preparation and having the patient complain that it was cloudy, or precipitated and sometimes the patient would blame the pharmacist and sometimes the physician. It is for the pharmacist to furnish us as clean a preparation as these proprietaries if we are going to prescribe the National Formulas.

Chairman.—John Wright, of the Eli Lilly Company, is called for.

John Wright, Indianapolis.—I think I have nothing to add to these discussions. I have enjoyed the expressions of the doctors and of the last remark that the pharmacist should supply the physician with clean preparations.

Dr. J. N. Hurty, Indianapolis.—I think those that have heard these papers will now understand that the druggists are thinking somewhat. I know that there are some physicians that have expressed themselves as though the druggist is rather an inferior person. Perhaps he is on the whole, but there are enough in the profession to redeem it. You have witnessed here to-day that fact. We have heard some papers here to-day that are certainly enlightening. Mr. Zimmer has very candidly and honestly told you his position. He is the proprietor of nostrums—says so, and has friends in both camps, yet he wants to do something, the wise thing to raise the profession in which he is engaged, and if it is necessary to throw aside the profits he will throw them aside. He would rather see the profession advanced than to reap a financial reward. The leading druggists are thinking and have measured up the medical fraternity, and have got the right measure, too, in almost every instance, and when compelled to put up a prescription and they know the physician does not know what is in that prescription they know he is haphazard and he need not make the excuse that he does not remember the National Formula. It simply means he has not studied his own works on therapeutics and pharmacopeia, and the druggist understands that and I assure you from a long experience in the drug store that the people understand it, too. I do not say the proprietary articles are useless. On the contrary, these people have pushed these articles because they have been advantageous, but the time has come when we have learned all they have to teach; therefore, let us profit by the lesson now. We do not have to look

after their monetary affairs and therefore I would emphasize over and over that this prescribing of the proprietaries should cease for their own sakes, for the sake of the medical profession and science and also for the advancement of pharmacy. This is the second time I have heard these papers read, and that they are good papers I do not have to declare to you.

Dr. J. M. Anders, Philadelphia.—I wish to add to what I have said this statement, that I quite agree with the last speaker that we should not prescribe the proprietaries too much. We do not know the composition and action. We should never prescribe anything in the nature of a mystery to ourselves.

CHRONIC MYOCARDITIS

FROM A PURELY PATHOLOGIC STANDPOINT.*

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One has only to glance over the literature of the past few years to see how the study of diseases of the heart has been focused on the myocardium. Valve lesions with their abundant and obvious pathology have been found wanting in explaining the numerous cases of heart weakness encountered. Indeed, it was long ago realized that something more than the defect in the valve mechanism was necessary to break the efficiency of the circulation. The results of this study have been to investigate with great care the histologic changes occurring in the heart muscle, the functional capacity of the muscle and the attempt in all cases of circulatory disturbance to correctly interpret the condition of the heart muscle before a definite diagnosis is made, a prognosis is offered or therapy outlined. It has incidently revised our conception of the field and action of the so-called heart stimulants and demands now considerable nicety in selecting an agent of this class.

One of the terms most frequently employed at the present time to denote a condition of cardiac weakness, with or without valvular defect, is chronic myocarditis. Etymologically, this would imply a long-continued inflammation of the heart muscle, but the most superficial reading is sufficient to show that the term is not so used. Balfour would make this condition identical almost with what he calls the senile heart. Krehl, in Nothnagel's Encyclopedia, attempts to make it

distinctly the sequel of acute myocarditis or disease of the coronaries. His actual words are: "As inflammation also attacks the walls of the large vessels; as, in addition, the smaller vessels may become involved secondarily; as finally the parenchyma, both primarily during the myocarditis and secondarily from disease of the blood vessels, may undergo granular and a fatty degeneration in a great variety of ways, there results a combination of arterial, interstitial and parenchymatous processes, and it may be exceedingly difficult in an individual case to determine positively what was the primary lesion." If he had left out the introductory remarks his words would be about what may be found in all the writings. Babcock boldly admits the difficulty in classifying, and selects the term "chronic myocarditis" to cover those conditions variously called fatty degeneration, fibroid degeneration, weakened heart, myofibrosis and chronic cardiac inadequacy. This is certainly in line with the modern inclination to simplify terminology and classifications as well as to recognize variations rather than species.

Practically, whatever their formal classification, one is forced to the conclusion that under this term most writers might include all those cases in which pathologic changes have occurred in the heart muscle fibers themselves, or in their number, of a permanent nature and have gone on to the extent of interfering with the perfect action of the organ.

Under this term the anatomical conditions usually considered are fibrosis and fatty change. Here we are at once confronted by certain pathologic problems as to the origin of these changes. It has been the philosophy of some that fibrosis always means antecedent inflammation, but this is not tenable, as shown by Adami in his most excellent monograph on inflammation. Fatty change means a disturbed nutrition without necessarily giving any information as to the way in which that disturbance is brought about. Fibrosis may be present in all degrees and may be the result of former inflammation or it may be the result of a disintegration of muscle cells from insufficient nutrition, the connective tissue being of a low grade of differentiation and capable of growing with a food supply wholly insufficient for the highly organized muscle tissue. In this sense, then, it is a conservative process maintaining the integrity of the heart wall even if it does not add strength to it. It may be seen in the gross specimen as lines or patches of paler tissue, firm to the touch and dense to the knife, throughout the organ or most commonly in the lower por-

* Read before the Indiana State Medical Society, at French Lick, June 18, 1908.

tion of the left ventricle. It may be most marked in the papillary muscles. In the extreme degree the heart is small and extremely dense, cutting almost like cartilage. In the early stage the heart may be enlarged, the walls of the ventricles thickened. If the connective tissue hyperplasia is distributed throughout the organ it is usually most marked about the blood vessels. In other cases the fibrous hyperplasia is distinctly patchy, these patches being most frequently found near the ultimate distribution of the coronaries for reasons which will be considered later. It should be mentioned here that the degree of fibrosis is not always commensurate with the symptoms of cardiac inadequacy, since an extreme degree is often found postmortem with comparatively slight evidences of heart weakness before death. Again the position of the fibrosis may be of far greater importance than the amount. It is easily apparent that hyperplasia of connective tissue with muscular degeneration in the bundle of His would lead to the most serious disturbance of the action of a heart otherwise histologically in good condition. Such a condition has been found, the cause of the change in the muscle of the bundle being probably syphilitic. Eichhorst states that "it is especially noteworthy that isolated, small foci of connective tissue proliferation have given rise to the most distressing symptoms, while in other cases most extensive connective tissue deposits have been unattended with any symptoms."

The presence of fat in varying quantities has long been associated with cardiac weakness. Indeed, formerly the diagnosis of fatty heart was often made, and this was the term applied to what we are now calling chronic myocarditis. I wish to eliminate at once those cases of cardiac weakness associated with general obesity in which the two conditions have always been closely associated and have developed early and *pari passu*. In this condition there exists a congenital cardiac muscular depravity or, the muscle being normal in amount and quality, the heart is mechanically interfered with by the weight and bulk of the superimposed fat. Krehl states that the heart muscle of obese individuals is extremely light in proportion to the body weight. On the other hand, it should not be forgotten that there is no strict parallelism between general obesity and fatty deposits around the heart and many obese persons have heart and skeletal muscles of excellent quality. The fatty conditions we are interested in at this time are those conditions in which droplets of fat appear in the interior of the muscle fiber replacing to a greater or less degree the normal, necessary muscle protoplasm or sар-

plasm. This may be seen as a widely diffused process in some cases, the droplets of fat being very small, or the cells may become merely sacs of fat, the sarcoplasm having been entirely replaced. This may also affect localized discrete areas, giving the heart a mottled appearance, the so-called faded leaf markings. Again it may be seen as fine yellowish points. If the process is more evenly diffused the whole heart is pale. In all cases the walls are soft and flabby; they are easily torn with the fingers, and when laid on a hard surface the organ flattens out from its own weight. The extent to which this change of itself impairs the action or rather efficiency of action of the heart is as variable as in fibrosis. Again quoting Krehl: "It may be said positively that a considerable degree of fatty degeneration is not incompatible with a fair degree of functional capacity. Pure fatty degeneration has a relatively slight effect on the strength of the heart." Balfour asserts: "I must most emphatically say that I doubt the possibility of diagnostinating a fatty heart."

These, then, represent the essential histologic changes, and both of these changes in this organ are pathologic conditions always. The two changes are in almost every instance associated in varying proportions, and this determines largely the gross appearance of the organ. Whether or not the heart is ever enlarged as the result of these changes, especially the fibrotic, is a disputed question. Balfour and Krehl say it may be; Gibson says there is almost invariably some enlargement with an increase in weight as well as bulk, although he also says that this enlargement is the result of dilatation with or without hypertrophy. It is easy to see how dilatation could occur as the result of the loss of elasticity of the muscular walls and, on the other hand, if the process goes on long enough, by the contraction of the new formed connective tissue as it matures, the heart may become small, hard and the chambers of less capacity. A specimen in the museum of the Indiana University School of Medicine illustrates this very well. As was stated before, the color of the organ will depend almost wholly on the extent of the fatty change. There is usually some increase in the thickness of the ventricular walls unless they have been thinned by dilatation.

In discussing the causes of this condition, the writer believes that the influences to be considered fall easily into four groups:

1. Mechanical. Persistent demands which necessitate all the power of the heart muscle to meet the demand constantly can hardly fail sooner or later to use up the resources of the mus-

cle, produce true fatigue and perhaps through impaired powers of metabolism degenerative changes come on and the muscle fibers are replaced by fibrous tissue. This cause, however, is so closely related to or accompanied by bad habits or insufficient food supply that its purely individual importance is hard to estimate. The weak hearts of the vine dressers of the hill country who carry great loads of manure on their backs up the hills, the stevedores and others of like social status and labor belong to this class. They are notoriously ill fed.

2. The second class comprises those cases in which the blood supply of the heart muscle is insufficient for its proper maintenance. This would be well illustrated by the not infrequently seen case of beginning sclerosis of the aorta in which the process begins around the mouth of the coronaries, markedly narrowing their lumen and thereby diminishing the volume of blood that can pass through. Again sclerotic changes occur in the coronaries themselves, their mouths being normal in diameter, and thus the myocardium receives a diminished supply of blood. Still again an incompetent aortic valve by failing to maintain sufficient pressure for a sufficient time in the aorta might interfere with the flow of a sufficient volume of blood through normal coronaries. In all these instances, however, there is the possibility of the presence of toxins which of themselves are considered capable of producing the changes under question.

3. Perhaps the most common and most important of all the causes is the metabolic disturbances in the muscle fibers produced by the constant presence in the blood of toxins or the presence for even a comparatively short time of some very virulent poison. Under this head would be placed those diseases admitted by all to be the most common factors in the production of chronic myocarditis, pyemia, typhoid fever, malaria, nephritis, chronic gastro-intestinal indigestion, syphilis and the excessive use of alcohol. Many other diseases might be mentioned, but it is unnecessary to attempt to enumerate them all, as the one important feature of all of them to be considered is the degree or duration of the accompanying toxemia.

4. Extension of inflammation into the myocardium from endo- and pericardium. In such cases it is the myocardial changes rather than the endocardial or the pericardial that determines the gravity of the disease.

General vascular sclerosis, while one of the almost constant accompaniments of chronic myocarditis, is not easily classified. Indeed, we must

admit that not infrequently, like chronic fibrosis of the kidney, it is but a part of a general degeneration of the whole cardiovascular system and is in no sense the cause of heart lesions. In other cases it undoubtedly occurs early and is to be held responsible for the myocardial lesion. Here again we must remember not only the mechanical obstruction to the circulation produced by the stiffened arteries with the increased amount of work thereby demanded of the heart, but also the probability of the presence in the circulation of toxins. Indeed, the influence of toxemia can hardly be overemphasized. One of the most constant effects of toxins on cells is true fatty degeneration, or fatty metamorphosis, as some prefer to call it. This degeneration may be only temporary and the cells recover completely, as we must infer when no signs of cellular impairment follow one of the acute toxemias. On the other hand, the cells may be permanently impaired; not wholly incapacitated for work, but never restored to full vigor, and this I believe to be the explanation for the appearance of chronic myocarditis long after the acute condition has subsided and all has been thought well. One of the results of the full realization of this fact about the influence of toxins has been to search the past history of the patient with chronic myocarditis with the greatest care for toxemia, and in almost no other disease is an accurate and complete history of so much value in making a correct diagnosis, both clinical and pathologic. There are many other influences active in the production of this condition mentioned by various writers. My observation has been that they vary largely according to the class of people from which each writer has made his clinical observations. Grief, worry, excessive business cares have been mentioned, but I believe that these and other somewhat similar conditions are so intimately associated with faulty habits and surroundings that their true influence is impossible to gauge. Perhaps a word should be said about age as an etiologic factor. We now recognize that chronic myocarditis is a disease of all ages and is not to be confounded with the senile heart unless the common meaning of the word senile is not used. Krehl says it has a distinct predilection for youth and middle age, but in early life it is only seen following the acute exanthemata and diphtheria. If we admit the causes I have mentioned before and their relative value as I have given them, it is easily seen that age is of comparatively slight importance.

The perverted physiology of a heart the seat of such changes as have been mentioned is not

hard to understand. The first and greatest item is the loss of propulsive power for the blood current. Muscular degeneration, and more especially replacement by fibrous tissue, means loss of elasticity and contractile power. Dilatation, therefore, is common. If the fibrosis is extreme and the organ diminishes in size the chambers become smaller and the volume expelled at each contraction and the force under which it is expelled are insufficient to keep the vessels filled and the various tissues well nourished. Localized tissue strength impairment may be the cause of aneurysmal distension; a sudden overfilling of the chambers may completely paralyze them and sudden death follow; there may occur rupture under sudden high pressure within the cavities. Finally chronic passive congestion or a general ischemia or the involvement of other viscera may become the dominant features in the clinical history of the victim of chronic myocarditis.

DISCUSSION.

Dr. F. B. Wynn, Indianapolis: I find myself almost in a status complexus as I contemplate the material that is open to me for discussion and appalled also at the amount of Dr. Hessler's work here. I believe the study is one of the first importance. We know the care with which he went into it, and we know the scientific instinct developed here. I can only refer to two or three points. In regard to the first paper, I regret very much, as I may claim him as my student, that Dr. Ritter has not presented this to us in another way. I wish that instead of this summary he might have presented a very complete series of specimens and that we might have spent the time looking at them. Now under the four heads, as to the cause of myocarditis, whether acute or chronic, as to the toxic element, there can be no question about that, and I think as practitioners we are all too slow to recognize the truth of this statement. There are so many diseases followed by acute myocarditis to which attention has been given more especially this morning, that it behoves us in cases of scarlet fever, diphtheria and influenza to study this question. A year ago I had occasion before this society in discussing this to emphasize the very great importance of influenza as a factor in myocarditis. There are cases in which the origin can be attributed to an attack of appendicitis. In influenza, too, we begin to see the effects right away, and the visible symptom is edema and the like.

One thing mentioned in Dr. Hessler's paper is the psychic element, the nervous element. To my mind, in a diagnostic way, this is often a very interesting problem and a practical one in treating such cases. The nervous element you see over and over again in cases of neurasthenia,

anemia, etc. I often find myself perplexed to know whether there is pure neurasthenia or whether there is myocarditis present. My experience has been almost identical with those of the second paper. Rest and change of environment will bring about a change for the better, and yet I have thought that there was perhaps myocarditis as well, and I have sometimes been perplexed to know whether it was neurasthenia or myocarditis.

Now there is no question about the importance of the blood pressure, and when we come to treat patients with high blood pressure there is no doubt that rest and change of environment and relief from stress and worry will serve to reduce the pressure. We are responsible for overstating the influence of these things. I might speak of a woman who had arteriosclerosis. Over-repetition of examination is often bad for the patient. Day after day her blood pressure was taken, two or three times a week her blood examined, her urine examined every day. That looks very fine, but it sometimes produces a psychic influence on the patient that is very bad. This woman came home from the institution where she had been for treatment, having lost nearly twenty pounds in weight, very largely the result of the mental impressions she had received.

Dr. Walker Sehell, Terre Haute: I think we are especially fortunate in having these two papers that dwell directly with the pathology and diagnosis, especially the second, dealing more with the diagnostic features of myocarditis. These questions can only be discussed very briefly for the reason that to attempt to elaborate these different diagnostic matters would extend the time of discussion too long. The especially valuable feature, I think, in diagnosis is, as the second essayist says, that many of these cases suffer from stomach symptoms. I remember only last week studying a case where two very excellent physicians had distinctly announced that the woman was suffering from cancer of the stomach, which only shows that the stomach symptoms can be so prominent that unless all symptoms are studied carefully a mistake may be made in the diagnosis. Many of these cases are too far along for the heart muscle to respond to cardiac stimulation. The particular point in the treatment of these cases, it seems to me, is that too frequently physicians, when the diagnosis is made, believe it requires cardiac stimulation. It should never be used and diagnosis should never be made unless the symptoms are actually present. I quite agree with the doctor in thinking that we should not talk with the patients in regard to their real condition only at the last, when they have a right to be warned that the end is approaching.

I want to emphasize, too, the diagnostic symptoms mentioned by the second essayist—that is,

that one of the best evidences of disease of the myocardium approaching is the presence of the broad apex beat. Whenever in the stomach you have evidence of pulsation of the right heart, then make a diagnosis of insufficiency of the myocardium, and this diagnosis can be very early made from these symptoms, and quite frequently the evidence that the heart is diseased is that it is supplemented by general disease. Quite frequently it is the liver and the spleen, and the action of these important organs enables one to make a diagnosis of insufficiency or of the beginning of degeneration of the myocardium, when a careful examination in the way of auscultation would leave one in doubt. Some extraordinary exercise would cause a strain upon the heart, and then the abnormal sounds will become quite evident. Another feature in the way of diagnostic symptom is that quite frequently when the second aortic sound is heard, it is not at the right, but you must search to the left of the sternum, and this must be determined by the tone; this can be determined by listening to the sound of the pulmonary and aortic valve, and you can learn its actual intonation that reaches the ear, and quite frequently this incompetency of the pulmonary valve is set forth when really it is the aortic valve that is at fault.

Dr. Robert Hessler, Logansport: I had no opportunity to say in my case reports that I tried to rule out the psychic factor and put the cases on a purely physical basis.

THE TREATMENT OF DIABETES.*

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However painstaking we may be as regards detail in the management of such pathologic conditions as frequently come under our care, few of us will deny that, in dealing with those of infrequent occurrence, we are apt to follow more or less routine paths. While these may embody well-defined principles of undoubted indication as applied to the average case, they fail to take into consideration those personal elements, the recognition of which is so important to a successful therapy. Diabetes in the experience of most physicians is a comparatively rare disease, and in no other condition, I venture to say, is this tendency more frequently observed.

If the only object in treatment was that of preventing or diminishing the glycosuria, and this, of course, is the most important, it would be a simple matter, for it has long been recog-

nized that the exclusion of carbohydrates and the administration of opium will usually accomplish this result, but unfortunately there are many other problems which arise, both as a result of certain complications and even of the treatment itself, which afford indications of scarcely less importance.

The management of the diet is now, as it always has been, the first essential, but modern investigations in the processes of metabolism have added much to our knowledge of this subject and have greatly enlarged our opportunity for dealing successfully with those phases of the disease which formerly were considered beyond our control.

As in all other conditions, a successful therapy must have as a basis an accurate diagnosis, which in this instance means not only a recognition of the glycosuria and certain other symptoms present, but a careful study of the metabolic processes as presented in the individual case. To accomplish this, calorimetric and quantitative methods, instead of the ordinary qualitative analyses, must be employed. It is not sufficient, for example, to know that sugar is present in the urine. We must know exactly how much is being excreted daily, and to make such a determination we must collect and measure accurately the entire volume of urine voided during the twenty-four hours, reserving for examination a specimen of that voided at night and that of the day. Four per cent. of sugar in 100 ounces of urine may be exactly the same or may indicate a more serious condition than 8 per cent. in fifty ounces.

Another substance for quantitative estimation is urea, but such an examination is only of value if we take into consideration the amount and character of liquids and foods ingested and exercise taken. At least a qualitative examination should be made for acetone, which, if present, calls for one for oxybutyric acid. The usual tests for albumin and the microscopic examination naturally follow, as do also a careful inquiry into the patient's ordinary habits of life, variations in weight, family history, antecedent conditions, symptoms and, of course, a complete physical examination.

With this data before us, our next step will be to determine by means of a test diet the exact amount of carbohydrates which can be tolerated. It is always dangerous to exclude these substances entirely, and, therefore, we reduce them to a definite standard as represented in the following regimen, which I employ for this purpose:

* Read before the Indiana State Medical Society at French Lick, June 18, 1908.

For breakfast, two soft-boiled eggs, a cup of weak tea or coffee with cream (no sugar), a steak or chop weighing, cooked, about three ounces, one piece of toast with butter. For dinner, a cup of meat broth containing an egg or some green vegetable as asparagus or tomatoes, a liberal portion of fish or chicken or a small amount of each, some celery, lettuce or tomato salad with plenty of oil, a small piece of cheese, a demi-tasse of coffee, but no bread. The supper menu includes two or three strips of bacon, two eggs, a green vegetable salad as at dinner, a cup of tea and one piece of buttered toast. The carbohydrate content of this diet, which is represented by the toast, is approximately 100 grams.

In the very mild cases an adherence to such a dietary will usually bring about a disappearance of the glycosuria in 48 hours. In others in from three to four days. In those of medium severity two or three weeks are required, and in the severer forms of the disease a still longer period. In some the glycosuria will still persist even when all carbohydrates are excluded. As soon as sugar has entirely disappeared we should begin by adding more carbohydrates in quantities of 50 grams of bread daily until sugar again makes its appearance, showing that we have attained the boundary of carbohydrate metabolism. We then reduce the amount of such substances until we are again within the limit of tolerance, and in order to determine the relative assimilation of different forms of starch we may substitute for some of the bread an equivalent amount of potatoes or oatmeal, as not infrequently it will be found that patients will tolerate certain kinds of carbohydrates much better than others, and it should be our endeavor at all times to afford as great a variety of food as possible.

Three things must be constantly borne in mind in the course of these investigations. The first is the question of acetonuria, which, if present in considerable degree, is a signal for additional carbohydrates, but we must not be deterred by its earliest manifestation, as a like condition will arise even in health under similar dietetic restrictions. The second is the influence of the diet upon digestion and the nervous symptoms present, and the third, whether or not our patient is losing strength. Some loss of weight is almost certain to occur, but, if not material, may be disregarded, as the advantages to be gained from increased tolerance for carbohydrates thus acquired more than offset its disadvantages.

A very important point also in the feeding of diabetics, and one that is frequently overlooked, is that the foods which are eaten do not, as in

the healthy individual, represent a definite relation to heat and energy production, although the requirements are the same. In other words, that which is lost in the form of sugar and by excessive nitrogenous excretion must find its compensation in an additional amount of food ingested. We can not, of course, supply this deficiency by adding more carbohydrates, for these would only pass through the organism unchanged, so we are obliged to have recourse to proteids and fats, especially the latter, because of their greater value in the production of heat and in the saving of tissue waste.

In order to determine how *much* of the different classes of food will be required, we must include in our calculations a knowledge both of normal calorific requirements under like conditions of occupation, age and weight and of that which is lost by failure in oxidation. Let me illustrate my meaning by figures taken from a particular case.

J. W. B., congressman, age 57, weight 190 pounds (86 kilos). Reckoning 35 calories per kilo as the average requirement, we have $86 \times 35 = 3,010$ calories. This patient's diet, as nearly as could be estimated at the time he came under observation, was as follows:

Proteids	200 grams $\times 4.1 =$	820 calories
Carbohydrates	300 grams $\times 4.1 =$	1,230 calories
Fats	120 grams $\times 9.3 =$	1,116 calories

Total. 3,166 calories

He was passing 80 ounces of urine daily, containing 7 per cent. of sugar (2.25 grams per oz.). $80 \times 2.25 = 180$ grams $\times 4.1 = 738$ calories. Deducting the 738 calories lost from 3,166 calories taken, we have left 2,428 calories, which, as will be readily seen, is considerably below the requirements of a normal nutrition.

If we wish to carry this investigation still further and determine the loss in albuminoids, as represented in the amount of nitrogen excreted, there would also be shown in the case here referred to another loss of 131 calories from this source, but such estimations are rather too technical for ordinary practice and are usually not necessary. An estimation of the loss in carbohydrates should be made in every case and involves no special difficulties. The difference between the number of heat units utilized (as represented by the figure 2,297) and those required (3,010 calories) must have been derived from the combustion of tissue fat, and this, of course, means a loss of weight, which in the present ease amounted to a little over a pound a week.

The next questions to be decided are what particular articles of food should we permit, in what quantities may they be used and what are to be

excluded. Printed diet lists are included in all medical text-books, and these, together with tables showing starch equivalents of various forms of carbohydrates which are to be found in works on dietetics, will afford us many suggestions; then from our knowledge of the state of the patient's digestion and general nutrition we can, without much trouble, frame a diet that will meet the requirements in the case in hand, but to abstract these lists bodily and use them indiscriminately without modification is, I believe, a practice that is productive of much harm.

The principles which should govern the modification of such diet lists have, in a large measure, already been indicated, but a brief reference might be made to a few of the more important. In the first place, and these statements I wish to emphasize, there is no kind of food which is permissible in every case, and, in the second, none which may be given in unrestricted amount. The difficult problem is, of course, that of the carbohydrates. Bread is the most important single article, and where only a very limited amount of starch is eligible it is perhaps best to give it in this form. Bread, moreover, is our standard of carbohydrate assimilation and when other articles, as potatoes, cereals, etc., are substituted the amount of starch which they contain must be deducted from that allowed in this form. Vegetables, the carbohydrate content of which exceeds 5 per cent., should not be used in any quantity. Gluten bread, as a rule, contains about as much starch as well-dried toast and is much less palatable. The best food of this character with which I have had any experience is that known by the trade name of "Casoids." I have used it in the form of biscuits, and where patients do not object to the taste it fulfills an excellent purpose. Sugar in any form should be absolutely prohibited. Saccharin is the usual substitute when some sweetening is desired, but is, of course, without value as a food.

Whenever possible, it is well to permit fruits, for they give variety to the diet and, as a rule, are greatly relished. Most of them contain less than 6 per cent. of sugar and this is in a form that is more easily assimilated than dextrose. Grapes, bananas and dried fruits are exceptions to the rule and should be interdicted. The amount of carbohydrates contained in the fruit should also be taken into consideration in the allowance of bread and vegetables.

Meat contains not only albumin, but fat as well; the former is approximately 25 per cent. and the latter 10 per cent. Almost any kind of meat, fresh or salt, with the exception of liver,

may be included, if not contraindicated by the state of digestion. Fresh pork, sausages, bacon, etc., are especially valuable because of their high percentage of fat. It is well, however, not to permit more than about a pound of meat a day, as larger quantities are apt to destroy the appetite.

Eggs are particularly useful and a considerable proportion of the necessary proteids may be supplied in this form.

Fat foods, such as butter, cream, olive oil, etc., are the most important of all, their relative value in calories being more than double that of albuminoids and carbohydrates. Milk is, as a rule, only suitable if it is of good quality, i. e., contains a considerable percentage of fat.

Of alcoholic beverages, sweet wines and beer are to be excluded, but whisky and brandy often serve a useful purpose in supplying a readily combustible material which saves tissue waste. Coffee and tea, while without nutritive value, are harmless in most cases. Water should be given in quantities sufficient to satisfy the thirst, principally, of course, between meals.

To borrow a quotation from Naunyn, of Strassburg, than whom there is perhaps no greater authority upon this subject, "Next in importance to the dietetic treatment of diabetes, mineral waters are alone of much service." For many years, as is well known, Carlsbad has enjoyed a wide reputation in the treatment of this disease, and I have been interested, therefore, in seeing what results might be obtained from the French Lick waters, the analysis and properties of which are very similar. My opportunities for making such investigations have been quite extensive as I have had under my care during the period of my residence at the springs (now two years) a total of 172 cases, embracing almost every stage and degree of both glycosuria and diabetes. Generally speaking, the results have been most gratifying. A majority of these cases have been referred to me by other physicians, and these as well as some others had been following a restricted diet before coming to the springs; hence it has not been difficult to determine to what extent the improvement noted has been the direct result of the waters, or at least of the treatment there instituted. Cases of moderate severity, that is, those showing sugar percentages ranging from 2 to 5 per cent., have with rare exceptions shown improvement almost from the very beginning, the sugar generally disappearing entirely in from three to ten days, even when no alteration has been made in the diet, and especially is this true of the glycosurias of alimentary origin.

Good results have been observed in the cases of a severe type also, in one in which sugar was present to the extent of 15 per cent. this substance entirely disappeared in 16 days. The improvement observed, however, has not been simply in a reduction of sugar, as almost invariably there has been associated with this an improved nutrition and an amelioration of symptoms due to coexisting conditions. Chief among these influences have been a gain in appetite, an improved digestion, a disappearance of nervous phenomena and a relief of such concurrent affections as eczema, furunculosis, gout, obesity, etc. As to the question of what particular cases should be sent to a resort and those which may best be treated at home, we must be guided by individual circumstances, taking into consideration such factors as the severity and duration of the disease, the willingness of the patient to cooperate in our study of the case, facilities for obtaining a proper diet at home and the effect of such environmental influences as pertain to occupation and general mode of life. When these conditions are favorable, treatment may be begun at home, and when possible an occasional sojourn to the springs taken later. Advanced cases showing marked acidosis or evidences of general debility should not be sent away and are perhaps best treated in a hospital.

As regards the employment of waters of this character in bottled form, I would say that, while they serve a very useful purpose both in correcting complications and in increasing carbohydrate tolerance, the results obtained are, as a rule, not as good as those seen at the springs. The difference, of course, is largely explainable in the absence of such extraneous influences as rest, freedom from care and opportunity for outdoor exercise which the resort affords, as also in many instances to the better facilities for obtaining a suitable diet. Patients under treatment in an institution will, as a rule, follow more rigorously the rules prescribed for them than they will at home, for there they have no other interests to divert them from the purpose in hand, and the improvement observed, as also the knowledge that they have found a remedy in the waters, gives them much encouragement for the future, a factor of no little importance in all diseases.

Drugs play, or rather should play, a very subordinate part in the treatment of diabetes. Of the large number which have from time to time been recommended, only a few are of real value. Opium and its alkaloids are perhaps the most reliable, but are at the same time the ones which

are oftenest abused. They are especially useful in those cases in which we are unable to effect a removal of the sugar from the urine by dietetic and hygienic means, but we must bear in mind the danger of habituating our patient to their use and their well-known tendencies to disturb digestion and retard elimination. The beneficial effects which they produce are, at best, only temporary, for, instead of increasing carbohydrate tolerance, they diminish it. The best preparation is codein. Bromids are often useful in the control of nervous symptoms. The salicylic acid compounds, the best of which is aspirin, doubtless exert a favorable influence in increasing carbohydrate tolerance in some cases. They should not, however, be employed when there are gastric or renal complications. Alkalies are undoubtedly the most valuable agents we possess and may be given in considerable quantities for prolonged periods. Their chief virtue lies in the fact that they neutralize acids, thus counteracting the tendency to acidosis. They are also stimulants to the hepatic secretions and in many cases exert a favorable influence upon digestion. The natural alkaline waters are the best form in which to administer them, but various synthetic compounds, such as sodium bicarbonate and calcium carbonate, may be employed instead. Taka-diastase and pancreatin are useful in assisting digestion, but the results obtained from organotherapy in general have lacked much of what might be expected upon theoretical grounds.

Time will only permit of a cursory reference to the treatment of the complications. The more common of the aural and cutaneous lesions, as also tuberculosis, syphilis, gangrene, etc., are to be dealt with upon the same general principles as apply to their treatment when encountered elsewhere. Disturbances of digestion are of very frequent occurrence and often constitute a very difficult and serious problem, in the solution of which cognizance must be taken of the various factors pertaining to gastrointestinal secretion and motility. Attention must be given also to the manifold symptoms of neurotic origin and, above all, to the influences of such complicating conditions as under-nutrition, gout, nephritis and cardiovascular changes. Of the ever-to-be dreaded symptom of coma, we must be constantly on the alert. As means of prophylaxis, the administration of alkalies and attention to digestion and elimination are the most important. The onset of a tendency to somnolence or of considerable quantities of the acetone bodies in the urine are indications for the immediate increase of carbohydrates, regardless of their in-

fluence upon sugar excretion. When coma is once established, our only hope is in the free use of alkalies by hypodermoclysis or intravenous injection, stimulating the circulation and supplying oxygen artificially. The only appropriate diet at this time is milk.

The more experience one has in dealing with diabetes the more optimistic he becomes as to the prognosis, and the more that treatment is based upon physiological principles the less reliance will there be put upon drugs. I believe a large majority of these cases are absolutely curable if proper methods are employed early, and I do not hesitate to apply this statement to those in whom there exists a strong hereditary predisposition or in whom the tolerance for carbohydrates is comparatively slight. Even in those cases in which a complete cure is not to be expected, life can, without serious discomfort or great inconvenience, be prolonged to the full expectancy. The exceptions, of course, are those in whom the disease has developed at an early period or is dependent upon organic lesions of the pancreas or central nervous system.

In conclusion, let me urge upon you that glycosuria, even of slight degree, should never be regarded as trivial, as it is always an evidence of special vulnerability, and if we will but study carefully the idiosyncrasies of our patients and govern our treatment accordingly the results obtained will more than justify the additional effort required.

DISCUSSION.

Dr. Allison Maxwell, of Indianapolis: All of you know of the subject of a diabetic dyscrasia that does not die. I know of one case that lived over twenty years in comparative comfort. But in acute cases you will have to be more prompt or else your patient will contract tuberculosis or Bright's disease and go off suddenly in coma. So in the treatment these two important classes must be kept in mind.

Now, of course, the treatment is dietetic and medicinal. Without dietetic treatment the medicinal is nothing; therefore, there was presented to you a diet list which, I think, is very good, indeed. Of course, in a case of this kind you must consider somewhat the pathology.

A case came to me, a business man, 40 years of age, as vigorous looking as Dr. Kahlo; his step elastic; seeming to be in prime health. I told him he had diabetes. It was caused in this case by the fact that he had too many "irons in the fire." He was doing this, that or the other thing or three or four of them, any one of which would be enough for one man to do. He would go to Chicago to-day and off somewhere else to-

morrow and then to New York in a week, and kept his nervous system at a high pitch; took a "high ball" occasionally, but never was drunk. What was the treatment? That is very evident to you all—simply to slow down. When I told him, after I had made an examination of the urine a number of times, he went to New York on business, apparently was well, and he consulted an eminent specialist, and he did not prescribe a long rigmarole of medicines. What did he say? "Get out of here. Go to Europe and do not come back for three months." The man did not go to Europe—could not go—but he came home and slowed down. The result is he is entirely free from the trouble now. In his case it was simply brought on by high pressure and the cure consisted in a change in his method of life. Usually the treatment depends somewhat on the cause of the diabetes or glycosuria. I have had cases in which I gave an exclusively milk diet—Jersey milk with plenty of cream, with a little sour wine. They would tire of it, but the sugar would disappear, and they kept up in flesh pretty well. But they would tire of the milk diet and go back to this or that or something else. This was the case that lived over twenty years after the first discovery of the disease, but whenever she would keep to the milk diet the sugar would disappear entirely. I can not suggest a better general diet than that suggested by the essayist. I have a case now in which I allow the patient a similar diet and I also allow the patient the crusts of French bread. It satisfies the craving for bread. I have also given them zweibach. Of course, we have to satisfy the patient somewhat. I have also given the patient a baked potato with the skin on—let them have it all. It does not seem to have the same effect as a boiled potato with the skin off, but in this form it seems to be less harmful and it satisfies the appetite to a certain extent. Of course, in many of these cases we have albuminuria present also. I believe that the benefit of the French Lick waters is largely due to the effect upon the liver and upon the kidneys and stomach—in fact, get the patient into a hygienic condition and then the sugar begins to disappear.

Dr. George T. McCoy, of Columbus: In regard to the paper I have nothing in the way of criticism and but little, if anything, to say as to the test for sugar and lack of sugar. I think the subject of the paper would be the management rather than the treatment of diabetes. In regard to the use of alkalies I have great faith in them. You can get these in various forms, and I have patients who use the Pluto water at home, but they are much more improved when they have a sojourn here at the springs; but I think the better you get the condition in general the more readily you will do something for the

glycosuria. If 40 per cent. of these cases result in tuberculosis, why should not tuberculin be used in diabetes? I feel myself that in properly selected cases where the family history leads us to suspect tuberculosis the early use of tuberculin, carefully and systematically managed, would be of great use, and, as this is the termination of so many cases of diabetes, I believe it is reasonable to suppose that it will be a benefit.

Dr. F. C. Heath, of Indianapolis: I would like to say just a few words in regard to the eye lesions of diabetes. These are frequent and important. The most common eye lesion is the occurrence of double cataract. Some of these cataracts disappear spontaneously. Keratitis, iritis, retinitis and other eye lesions are reported as due to diabetes, and I have seen some cases of these complications. I saw last year a case of optic neuritis which I am sure was diabetic in character. The optic neuritis disappeared or vanished under the use of arsenic, which also improved the other conditions. Another thing of interest is the change in refraction. I had a case last December which took two dioptries for distance and $3\frac{1}{2}$ dioptries for reading; two months later she took 4 dioptries for distance and 6 dioptries for reading, nearly double the first measurement, and in May she had practically returned to the glasses of December. When she stated that she had diabetes, that accounted for the change. There have been similar cases reported in the literature. It is difficult to account for this, but a suggested explanation is the effect of the disease upon the index of refraction of the crystalline lens.

Dr. A. E. Sterne, of Indianapolis: The most important feature of Dr. Kahlo's paper, as I regard it, is the emphasis he placed upon individual treatment of this condition; to make an index of the diabetic as to his general condition, watch his weight. If he is a patient under the starch-free and sugar-free diet and still continues to lose weight, then that patient should be taken from the starch- and sugar-free diet and placed upon a liberal sugar and starch diet. If under such conditions that patient gains, then such a régime would indicate that he at least assimilates enough of the carbohydrates to maintain his nutrition. The rest is passed as waste material, but if there is a gradual loss of weight and the patient enters into more pronounced debility there may be a development of acetonuria with fatal termination. That much as regards the treatment purely.

I want to emphasize one or two other points: Glycosuria does not necessarily mean diabetes. There are cases of glycosuria which come from the use of certain kinds of food and which immediately disappear after abstinence from that particular kind of food. That is not diabetes. Glycosuria occurs in various diseases of the

nerves and in other diseases where the nervous system is simply deranged secondarily through the improper use of food and the abuse of alcoholics or too much strain or various other things. In regard to the question of diagnosis, the early falling out of the teeth is a frequent symptom, and in all of those cases of rapid waste or consumption we certainly should be on the lookout for diabetes.

Dr. G. D. Kahlo, of French Lick: What I wanted to bring out particularly in this paper is the one fact that it is individual treatment that is going to bring success. There is altogether too much routine. There are too many of us giving the starch-free and sugar-free diet regardless of the patient's ability to assimilate the carbohydrates. If you will occasionally put them on the starch- and sugar-free diet and very carefully notice the effect in individual cases we will increase our attention to the hygienic treatment and make the greatest improvement. I recall very well the case referred to by Dr. Maxwell, and it is a fact that in a great number of the cases, as he referred to, they are men and women undertaking more than they are able to do. I believe a great many cases have originated in this way. The best we can do is to ameliorate the symptoms, but a great many cases of glycosuria will go into a condition of regular diabetes if these facts are overlooked. I have had occasion to observe the eye lesions in these cases here. The cataract I recall in several cases. But I would say, again, do not starve your patient. Do not let him subsist on his own tissue. Give enough carbohydrates to nourish even if you have to increase the glycosuria.

SPECIAL ARTICLES

THE PROGRESS OF INTERNAL MEDICINE DURING 1908.

A retrospect of the progress in internal medicine for the year 1908 does not show startling discoveries, but abounds in evidence of progress.

TUBERCULOSIS.

In the year's résumé, tuberculosis naturally claims first place. The meeting of the International Congress on Tuberculosis in Washington was an event of worldwide significance. There was a registered attendance of nearly 3,000, including 200 or more distinguished European workers, among whom were such men as Koch, Wolff-Eisner and Hart, of Berlin; Bartel and von Schratter, Vienna; von Unterberger, St. Petersburg; Landouzy, Calmette and Guerin,

France; Inman, Newsholm and Patterson, England; Yensen and Febiger, Copenhagen. The meeting has given to the tuberculosis movement in our own country a tremendous impetus.

Of the seven sections, that on sociology vied with the laboratory section in point of popularity. The occasion of greatest interest was a discussion of "The Relationship Between the Human and Bovine Organisms." Koch veered from his position as announced at the London meeting in 1901, when he maintained that the organisms were different. He now admits that bovine tuberculosis may be communicated to the human family, but considers it an insignificant factor in the causation of human tuberculosis. Most vigorous in opposition to this view were Ravenel, of this country, and Newsholm, of England. Despite the great admiration for Koch and respect for his view on the question, opinion and sentiment were almost a unit against him.

The new diagnostic tests with tuberculin—the ocular reaction generally bearing the name of Calmette, the cutaneous inoculation of von Pirquet and the tuberculin inunction of Moro—have precipitated a deluge of literature bearing on the subject. None of these tests is pathognomonic; all are confirmatory and, therefore, often valuable aids in diagnosis.

Experience has proven that ocular instillation sometimes causes violent conjunctivitis or corneal ulceration. On these accounts, Holden, of the Agnes Memorial Hospital for Consumptives, has discarded it. The cutaneous inoculation methods of von Pirquet and Moro, while perhaps not quite so reliable, have the virtue of harmlessness. They are especially adapted for use in eleemosynary institutions for children.

Next to finding the tubercle bacilli, animal inoculation with suspected sputum, pus or urine, constitutes the surest special diagnostic test. A recent modification of the method may be mentioned. Instead of intraperitoneal inoculation, the suspected material is injected above the knee of a guinea-pig or rabbit. If tuberculosis be present, the glands of the groin will enlarge in from four to six weeks and present postmortem the characteristic macroscopic and microscopic changes. Failure within this time to develop tubercular reaction in the glands proves with reasonable certainty the absence of the disease in the patient.

Ever since König, in 1884, reported his remarkable results from the operative treatment of tubercular peritonitis, the internalist has marveled at the curative effect which often follows

laparotomy. Just how the result is brought about is a moot question. Is it the admission of air, the traumatism incident to the breaking up of adhesions with a consequent phagocytosis, or what?

Recent investigations of Schulze seem to throw some light upon the subject. He reports seven cases of tubercular peritonitis treated by intraperitoneal injections of oxygen. Five of the patients were completely relieved by a single injection and the sixth by a second injection. The treatment was well borne and at the end of a year and a half the patients seemed cured.

The year has witnessed a constantly increasing faith in the efficacy of the tuberculin treatment. At the time Koch first recommended its use, in 1890, disastrous consequences so often followed the large doses given and the indiscriminate administration that the remedy received unfair condemnation and fell into disrepute. It did not seem to occur to those so ready to condemn tuberculin treatment that it was founded on principles quite as scientific as the administration of antitoxin in diphtheria. Fortunately a few physicians in Germany and America, who were not swept off their feet by the wave of adverse criticism of tuberculin, have continued to make careful clinical study of the remedy when applied in gradually increasing doses. Their cautious but favorable deductions have been powerfully augmented by the scientific work of Sir Almroth Wright, who has shown that the proper administration of tuberculin does unquestionably raise the opsonic index. And thus, during the last eighteen years, the problem of tuberculin therapy has been worked out with clinical observations on the one hand and laboratory proofs on the other. It is now entitled to professional confidence and ranks second only in importance to the dietetic and hygienic measures which have of late been considered vital in the treatment of tuberculosis.

A valuable contribution on the administration of tuberculin has recently been made by Latham and Inman, based on work done in the Brompton Hospital for Consumption and Diseases of the Chest. They have found that the remedy may be given by the mouth or rectum with equal reliability to subcutaneous injection, the dosage being about double that given by the skin. Their work has been corroborated by Calmette. They recommended beginning with very small doses; in acute cases, $1/50000$ milligram; chronic cases, $1/10000$. The dosage is very cautiously increased—more slowly in the acute than in chronic cases. As the appropriate dose is gradually

reached, a "flattening" of the temperature exacerbations occurs. While opsonic determinations are of value in ascertaining dosage, they consider the temperature a safe guide. They counsel as especially important, *absolute rest*, to limit autoinoculation.

OPSONIC WORK.

The fervor of expectation of two years ago concerning opsonic investigations and therapy has not been fully realized. The German medical world never enthused particularly over it, and the ardor of American and English investigators has cooled to a considerable degree. The present trend of thought in regard to opsonic work is not condemnatory, but to the view that it is too technical and tedious for general application in practice. It is not too much to hope that the near future will bring greater simplicity and practicability to the method.

PNEUMONIA.

One striking phase of therapeutic advancement during the year has been the tendency to treat all infectious diseases by the "open air" method, especially pneumonia. Considering its rationality and extraordinary effect in the arrest and cure of tuberculosis, the wonder is that the profession has been so slow to apply "open air" in other infectious disorders. A few of the eastern hospitals have established "open air" wards for pneumonia. Kilmer reports 36 cases thus treated, with a mortality of 2.77 per cent. Very prompt improvement is noted in the dyspnea and cyanosis. Favorable effect is also produced upon the heart. Patients themselves become conscious of the benefit of the fresh air. However valuable this method of treating pneumonia may prove, its general application among the laity will meet with vigorous opposition. It is urged that in carrying out the plan hot-water bottles be used and layers of paper be placed over the mattress and between the bed covers to insure maintaining the warmth of the patient.

TYPHOID.

The early diagnosis of typhoid fever is always a question of extreme interest to the practitioner of medicine. The method of making blood culture has been simplified and rendered practicable for general use. The blood is collected in capillary tubes from which plate cultures are made. It constitutes the safest early means of diagnosis, while the Widal reaction is more reliable in the later stages of the disease. Conradi found growth in 40 per cent. of the cases examined.

It seems probable that in the near future the method will become available to the profession in the public laboratories.

DIPHTHERIA.

Statistics of the Indiana State Board of Health show 745 deaths from diphtheria in 1900 as against 353 in 1907. The improvement of the death rate has been constant and is due, no doubt, to the use of antitoxin. The lesson of the year concerning this disease is the importance of early antitoxin administration. Data from the Pennsylvania State Board of Health on this subject are instructive. In 5,271 cases treated with antitoxin, the percentage of deaths was, when injected on the first day, 4.59 per cent.; second day, 8.77 per cent.; third day, 13.64 per cent.; fourth day, 23.52 per cent. Baginsky, in Berlin, and Martin, in Paris, report upon long series of cases sustaining with emphasis the contention of early administration.

EPIDEMIC MENINGITIS.

The antimeningitic serum devised by Flexner in 1907 has continued to grow in favor. It is not an antitoxin, but a bactericidal remedy. The amount recommended is 30 c.c. injected directly into the spinal canal after withdrawal of a like amount of cerebrospinal fluid. Slightly increased doses are to be repeated every 24 to 48 hours, if no improvement occurs, until three or four doses are given.

Flexner and Jobling, in an analysis of the 393 cases thus far treated, report 295 recoveries and 98 deaths—a mortality of 25 per cent., as against the usual 40 to 100 per cent. From Germany, Többen reports a mortality of 16.6 per cent. in 12 cases; Schöne, 27 per cent. in 30 cases, and Levy, 11.76 per cent. in 17 cases. These reports almost warrant the conclusion that a specific has been found for this grave malady. Dr. Flexner is willing to furnish from the Rockefeller Institution moderate amounts of serum, under certain very important conditions, however, as competent diagnosis and efficient clinical supervision.

PERNICIOUS ANEMIA.

Our knowledge concerning both the causation and treatment of pernicious anemia has been materially enhanced. Tallquist found in the mature segments of the tapeworm (*Bothriocephalus latus*) a lipoid substance possessing hemolytic properties. Experimental anemia may be induced by its injection. Tixier found that by experimentally produced ulcer of the stomach, bowel or intestine, a toxic substance develops in the

blood which is destructive of the red cells. It is thought that dental caries, pyorrhea alveolaris or other oral ulceration may in like manner lead to anemia. A similar hemolytic substance is found in the blood of those suffering from malignancy, especially cancer of the stomach.

Herter has demonstrated in the large bowel of persons suffering from profound anemia the presence of large numbers of anaërobic germs which break down proteids suited for the growth of indol-forming bacteria. The toxins formed by these organisms are strongly hemolytic. They are absorbed by the portal system in which hemolysis takes place. And thus with the discoveries of scientific research does the field of pernicious anemia, as an entity, grow smaller. Founded on the investigations of Herter, colon irrigations with warm salt solution have been used in the treatment of the disease with most gratifying results. The writer has proven the efficacy of the treatment in three cases. The irrigations should be given at least once daily.

HODGKIN'S DISEASE.

The finding of spirochaëtae by White (formerly of our own state) in the enlarged glands of pseudoleukemia is the most noteworthy contribution of the year concerning this disease. In three cases he was able to demonstrate the organisms in large numbers by various staining methods. They closely resemble the *Spirochata pallida*. White's interpretation of the finding is the possibility that they may be etiological, or that Hodgkin's disease may be a form of lues.

Further reports as to the effect of the Roentgen rays in treatment show decided improvement in quite a good many cases. The glandular enlargement diminishes; the fever subsides; the color, strength and weight improve. After a remission in the manifestations of the disease for perhaps several months a recurrence of symptoms takes place. Again, the *x-ray* may prove helpful, but the beneficial effects are not so prompt and lasting as in the former course of treatment. Finally, the treatment avails nothing.

LEUKEMIA.

The year offers nothing concerning leukemia especially worthy of note, except the accumulating evidence in favor of *x-ray* treatment. But little can be expected from it in the treatment of the lymphoid variety of the disease. In fact, the writer is prone to the view that it is harmful and may, indeed, provoke very serious manifestations. In two cases the glandular enlargement disappeared almost as by magic. Following two

or three short exposures there arose a diffuse, pulmonary exudate in which the patient was almost drowned. A repetition of the exposures produced again the same result. To say the least, extreme caution should be used in treating the lymphatic form with *x-ray*.

It is in the myeloid type of leukemia that the treatment proves most serviceable. All of these cases are benefited—the majority in a marked degree. While perhaps none of these patients is cured, they obtain by the treatment a respite from the clinical evidences of the disease for a period of from six months to three years. They may become so restored as to be able to resume their usual vocations. The writer has at the present time two such patients, who for over two years have seemed well, but whose blood still affords evidence of the disease. Even this is a vast improvement over any other treatment heretofore employed. It certainly offers as much to the leukemic patient as the removal of the uterus for cancer. Acute recurrence of symptoms may take place, and is often brought about by a mild acute infection, as la grippe, or more frequently intestinal disorders. The rays are then not so likely to yield favorable results. It is not too much to hope that improvement in the technique will still further lengthen the life of the leukemic, if not effect his cure.

PSYCHOTHERAPY.

Incident to the excesses and stress of the age, with its tense responsibilities, worries and disappointments, has come a host of functional diseases. From such a soil has grown a crop of erratic scots.

Thus have arisen and flourished Eddyism, Dowieism, faith cure, mental healers and the like, whose teachings have contained a grain of truth hidden in a great deal of chaff. This view is shared alike by many physicians and the orthodox church. A popular misapprehension is that physicians do not practice psychotherapy. The truth is they have, for all time, consciously or unconsciously, taken advantage of the psychic element in treating disease. All recognize how important is confidence of the patient in the physician, which constitutes the prime essential in giving potency to the doctor's medicine and advice.

Frankness, however, compels the admission that of late years the medical profession has underestimated the value of mental and moral influence in therapy. This condition of affairs has arisen through the powerful materialistic turn given to medicine through pathological dis-

coveries and surgical achievement. Calling us to account for this neglect are the various erratic sects to which reference is made. No one who has watched the signs of the times can doubt that we are on the eve of a great medico-religious movement.

A growing sentiment, in the medical profession as well as the orthodox church which seeks to direct this agitation and unrest along sane channels, has culminated in what is known as the Emmanuel movement. It has the endorsement of eminent churchmen as well as distinguished physicians.

The plan contemplates, first, a complete physical examination by competent physicians. Should the ease prove functional and adapted to psychotherapy, the cooperation of a minister is sought in bringing about an optimistic attitude of mind, and re-educating and strengthening the inhibitory moral forces by suggestion, persuasion and prayer. The wide interest awakened in the movement is shown by the fact that already nearly a hundred churches have in operation such a plan. All the popular magazines are giving wide space to its consideration. Public libraries are besieged by persons asking for books upon the subject.

What is to be the attitude of the profession in general toward this movement? The problem in an acute stage confronts us. The Emmanuel plan, although having much to commend it, is nevertheless fraught with great risk of abuse. All sorts of erratic persons, under the cloak of the church, will seek to practice psychotherapy. The right kind of a minister can render yeoman service to the functional neurotic. He may by prayer and by moral encouragement establish that peace of mind and hope which are the very foundation of recovery. Such persons were the late Oscar McCulloch and Charles N. Sims, beloved of so many people in our commonwealth. The growing opinion of the profession is that it would be unfortunate if clinics on psychotherapy were established generally in connection with church organizations. In the main the practice of psychotherapy should remain in the hands of physicians, but to this end doctors should perfect themselves in a knowledge of psychology and psychotherapy, which represents the very acme of therapeutic skill. In the difficult task of treating patients suffering from neurosis the co-operation of a clergyman of common sense, optimistic and inspiring personality will often accomplish more than aught else in effecting a cure.

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ADVANCES OF SURGERY IN 1908.

Surgery during 1908 has made a steady and marked advance in many departments, but we can not point to anything which could be called epoch-making in the year's work.

Probably no advance has been more marked than our methods of dealing with injuries and diseases of the blood vessels. The suture of arteries and veins is by no means new, but its wider application and great possibilities have been brought out during the year.

The experiments of Alexis Carrel, of Rockefeller Institute, and others have gone far to show that direct suture and splicing of arteries taken from lower animals is feasible. Arteries were used fresh and even after having been kept in cold storage for weeks, and they were successfully sutured in living animals. Sections of veins spliced into arteries did well also, showing the possibility of removing superficial veins from a patient to do service in some more vital part where the artery fails from injury or disease. Even whole organs were transplanted successfully; in one instance the kidney of a cat was put into a dog and the latter is still alive and well.

The possibility of treating thrombi by incision into the vessel, turning out the clot and suturing or resecting the vessel can be reasonably hoped for in the future, and that gangrene of parts as well as the integrity of vital organs may be in some limited extent prevented. Along this same line is the case of Lexner, in which he successfully transplanted a movable knee from a man recently killed into a patient from whom he resected an ankylosed knee.

We must not expect too much from these methods, still there is enough to give us hope that in a limited number of cases great good may be done.

During the year the management of prostatic hypertrophy and the technique of operations have improved, and the indications for operative interference as well as choice of operation have been in a great measure cleared up and the mortality has been reduced. The operation by the perineal route has grown in favor and in this country is employed in the large majority of cases; still, where the growths extend high in the bladder, the suprapubic route is best. In these cases the operation can be much more rapidly done by this route, and time is a very important factor.

The opsonic treatment of infection still holds an important place as our study for the year. It is pretty well settled that the opsonic index of

Wright is not of so great importance as supposed, and many now regard the clinical manifestations as a safe guide in application of the treatment as the index.

Many cases improve when the index is habitually low, while others with high index do badly. This fact will embolden the intelligent practitioner to use this treatment. Already reliable vaccines are to be had, which carefully and intelligently used will give good results. The near future will furnish still further advance in this line, and there is possibility that patients may be protected from infection by the treatment by vaccines before operation.

The value of staphylococcus vaccine in furuncles is established, as is also the value of tuberculin in tubercular disease of the kidney and bones.

Our advance in this department has not been great, but enough to promise more for the coming year.

EDWIN WALKER.

Evansville, Ind.

A GENERAL PLAN FOR A SCHEDULE OF MEDICAL FEES.*

J. N. McCORMACK, M.D.

BOWLING GREEN, KY.

I have long held the opinion that it was feasible to frame a plan for a schedule of medical fees which could easily be modified, as to the amount of the charges and other details, to meet the conditions and needs of almost any county or locality in any section of the country. As the plan I have in mind would be for the information, guidance and benefit of the public quite as much as of the profession, it involves conferences and a full understanding with the people of the community beforehand, as well as the fullest possible publicity afterward, through the public press, placards in each office, and otherwise, the explanatory footnotes being made an essential part of every publication.

One of the main difficulties about this in the past has been the almost universal, but wholly erroneous, opinion and insistence on the part of both profession and laity that all the physicians of a community have an equal value and should make the same charge for their services. We know full well, and in a way and to an extent that the people can not, that nothing could be further from the truth. Because of the faulty system of medical education, loose medical laws

and lack of local organization and incentives to study, in vogue in this country until recent years, there are regularly licensed physicians in almost every community in the United States, in cities and towns quite as abundantly as in the country districts, who are well paid for all they know or can do for their patrons when they receive anything, and I insist that the time has come for us to deal frankly and openly with each other and the public about this and all other matters of common interest. It is essential to the success of such a plan, too, that we abandon once and forever the antiquated notion of penalties for those who do not live up to the schedule, or blacklists for those who do not pay for services. Such harsh methods are contrary to the spirit and purposes of real organization and, in the very nature of things, can only be productive of misunderstandings and odium.

I have made rate-cutting and cheap doctors a matter of special study in every section of the country for years, and have come to have much sympathy for this class. On getting down to bottom facts, I have always found that they charged less for their services because they honestly knew, better than any one else did or could, that they were worth less than their competitors, and that this was their only chance to obtain or hold practice. There may be exceptions to this, but I have never found one that would bear investigation. They have my sympathy for another reason. As with the division of fees and commissions, contract and lodge practice, the use of proprietaries and nostrums, and similar mistaken practices and policies, all more hurtful to the people than to the profession, the fault is far more with the schools which pretended to educate these men than with them. In fact, without proper instruction about these matters during student life, so as to make it a part of their very being, just as important to the future physician and his patrons as instruction in anatomy or physiology, and sometimes with bad examples from their teachers to start them in the wrong direction, the wonder is that more of them do not do worse. These are just the men who most need the uplifting influences of county societies and postgraduate courses, they are actual entities with which we must live, associate or contend, and with tact and judgment many of them can be made competent. To suspend or expel them is far more of a punishment to their innocent patrons than to them, and it destroys the only chance of reclaiming them.

What is first and most needed in dealing with this class, for their own good as well as of the

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people, is to raise their earning capacity, to make them better practitioners and better men, by means of consistent, persistent postgraduate study, and by the influence and example of the higher grade members, in every county society and in such intercourse as comes in daily practice, and then in leading them to the adoption of systematic business methods and aiding them in other ways in securing better compensation. If we could substitute common sense plans of cooperation, the idea of a real community of interests, of practical, kindly helpfulness, such as is common between lawyers, in the place of the habit of fault-finding, jealousy and aloofness which is still as easy to find as it is disgraceful between the physicians of many communities, the difficulties of this entire problem would be reduced to a minimum.

The county societies and postgraduate courses furnish the facilities for doing the scientific and social features of this work. For the business side of it I am advising that the profession in each county or city consider the advisability of arranging for systematic monthly collections, with a carefully selected business representative, and a centrally located "medical collector's office," the collector to be under bond, and on a definite salary, and with authority to appoint as many assistants as may be necessary, for whom he is responsible, very much as sheriffs and city collectors do. The collector should be a man of tact and judgment, he should hold the affairs of each physician as strictly private and confidential, and he should be well paid. This plan should not be tried anywhere until good scientific work is well under way and a spirit of harmony secured, until all of the details have been worked out with the kind of business representatives indicated, and until public sentiment is prepared for it. Even in large cities the plan is worthy of consideration for colony and office buildings, wards or other convenient groups, if it can not be made available for the entire profession. It will not be easy to do these things in any community, in fact, it is never easy to do any important reform work which is worth doing, but with such preparatory work as has been suggested, and with tact and judgment in the earlier steps, I am convinced that the plan could be made as pleasant and convenient for the people as it would be helpful and profitable to the profession.

In most parts of the northwest and on the Pacific Coast the rate of charges sanctioned by custom is sufficient to sustain a competent and

equipped profession, but in many sections of the eastern, middle and southern states, outside the large centers of population, and for a large part of the profession in them, all except the surgical fees are wholly inadequate, and this is operating to the disadvantage of both the profession and people now in a way unknown to our forbears. This country in recent years has passed through an era of most remarkable prosperity, but physicians and other professional classes have not shared in it. With the cost of living almost doubled, and the cost of equipment for modern practice quadrupled, the income of medical men, except surgeons and specialists, has remained about stationary. Properly interpreted, poverty in the profession, and the lack of equipment and practical incompetency inseparable from it, is just as important to the public as to us, and the subject should be boldly discussed in public meetings and in the periodical and daily press until this real, positive danger to the people is a matter of common knowledge. Not only the higher standard of competency, but the increased usefulness of the profession in other ways should be made plain. It now probably does more real charity than all the other vocations combined, but the generous support to which it is entitled, and which is demanded by the highest humanitarian interests, would enable it to do a systematic, intelligent, discriminating relief work which is now impossible. To an extent not dreamed of by the laity, or even by many in the higher ranks of the profession, a large per cent. of the physicians in this country, in cities and towns as well as in the rural districts, on account of poverty and the pressing needs of their own families, are daily forced to take what is almost blood-money from a class of widows, teachers and working-women, in their times of affliction, whose incomes are so scanty when well, that it would and should be an honor and a pleasure to make them the special wards and beneficiaries of a properly supported profession.

The opportunity has come to me to study this whole question as no other man probably has ever been able to do. I am giving the results of this broad experience in my public talks every evening, and find, in the lay discussion which follows, that the people can be made to appreciate our difficulties and their dangers quite as readily as can the profession. In truth, unpleasant as is the admission, the trouble is with us and not with the public, as is true in regard to almost every other evil from which we suffer. If the physicians competing for the same prac-

tice in every section of the United States could really get together in all these matters, and then take the people into their confidence, the balance would be comparatively easy, as there are not enough of them to do the practice if every patient was given the time, and the kind of scientific examination and treatment, to which they are entitled.

For many reasons, any schedule intended for general adoption should cover only the ordinary fees for general practitioners and non-operative office work. Surgical fees are usually the subject of special arrangement, and, anyway, they vary to such an extent that an attempt to include them would give the public an exaggerated and misleading notion of what is received by the ordinary surgeon, or by any of them except under extraordinary circumstances, and would do more harm than good. As a rule, too, surgeons and specialists are better paid and are well able to take care of themselves. Besides, my experience has convinced me that it is in the field of general and office practice, with the hard-worked and underpaid ordinary practitioners, that the pressing need for reform exists.

For obvious reasons the schedule should be adopted by the profession as a whole, or as individuals, and not by the county society. The provision in the by-laws forbidding such action by the societies was inserted after careful consideration, was certainly wise under the conditions then and still existing, and probably should be permanently retained. The membership in most societies embraces only about one-half to three-fourths of the physicians of the county. While it is probable that all, including the former sectarians, will finally come in, this will be the work of years, and, although not absolutely essential, it is important that the schedule be agreed to practically by all of the active physicians of the jurisdiction, whether members or not. Besides, this has been one of the most fruitful sources of discord in societies in the past, often provoked by those who took least interest in the scientific proceedings.

With all the foregoing considerations in mind, and after the matter has been fully discussed with the people, the schedule and footnote, in their main features, are suggested only as the basis for discussion. The rate of charges will seem too high for some sections and entirely too low for others. I am proposing about what, in my judgment, would be fair and equitable at the present cost of living and equipment in the central, middle, western and southern states, but, of course, the exact fees and other details must

be arranged for each community in accordance with what is deemed just and proper. The rates should not be too hard and fixed. There are people of moderate circumstances in almost every community, factory operatives and others, who ought to pay something, and yet should not pay full fees, and a wise discretion on this and similar points must be provided for in any plan which is to be comprehensive and successful.

The order of arrangement and the items of practice included are as seems best suited for most counties and communities, but the purpose is to make it so simple and flexible that it can be altered to suit varying conditions and views. For instance, if it is thought best, fees for fractures and dislocations, or any other surgical or special work, can be easily added. It will be noted that a broad distinction is made between ordinary and complete office examinations, including a thorough examination of the chest, urinalysis and other like work involving extra time and skill. My own opinion is that a double charge should be made for night practice for well-to-do people, but I have yielded to the views of others on this point. Telephone practice is so annoying, exacting and unsatisfactory that it certainly should be paid for except where regular visits are being made, and in all cases after bedtime. Consultations are purposely made low in order to develop and encourage this variety of practice.

The form of schedule suggested and the footnote, as they should go on the placard, are as follows:

SCHEDULE OF MEDICAL FEES FOR _____ COUNTY.

1. Day visit in town.....	\$2.00
2. Night visit in town.....	3.00
3. Day visit in country, first mile, \$2.00; each after mile, one way.....	1.00
4. Night visit in country, first mile, \$3.00; each after mile, one way.....	1.50
5. Ordinary office examination and advice.....	1.00
6. Complete examination and advice.....	5.00
7. Advice or prescription by telephone.....	1.00
8. Obstetric case, uncomplicated, not over 6 hours	15.00
9. Life insurance examinations.....	5.00
10. Consultation, double ordinary visit.	
11. Surgical and other special fees as may be arranged.	

EXPLANATORY NOTE.

This schedule of fees is purely advisory. It is arranged and published for the information and guidance equally of the profession and people. It is intended to suggest the fees for ordinary services by competent physicians, for those fully able to pay their bills. It in no way applies to practice for the deserving poor, of which all agree to do their full part.

It may be that physicians who are less competent will feel that they should charge less for their services. This is recognized as just, and to do so will in no way affect either their society membership or professional standing. It is especially important that these less fortunate members should have the benefit of the postgraduate study courses and other scientific work of the county society, which are free to all, for their own good as well as that of their patrons, and regular attendance at these meetings should be made a condition of continued employment. Night fees are made higher for many reasons, but more especially to give time for such study and society work as is essential in keeping a physician competent to practice with safety to the people.

For the convenience and benefit of both the profession and its patrons, systematic monthly collections, in so far as possible, are requested in the future. It is believed that it will be more satisfactory to families to settle their accounts while they are small, and while they remember and are grateful for the services, and it will enable physicians to keep equipped for far better service.

OUR SYSTEM OF MEDICAL ORGANIZATION.

The county society is the unit. It is also the foundation of medical organization. Upon it rest the district and the state societies and, through the latter, the American Medical Association. The fate of the county society, in turn, depends wholly on the individual physicians in each county. They can make or break it. Should the physicians throughout the country lose interest in and drop out of the county societies, it would as effectually kill the American Medical Association as would the taking of stones from the foundation of a building cause it to gradually weaken and finally fall. Thus, you see, in the last analysis, medical organization rests upon the individual—even as political organization rests upon the individual.

These things being so, it behooves us to at least occasionally take stock of our attitude toward medical organization and think again of "what it means," of "what it stands for" and "what the values of membership are."

WHAT IT MEANS.

My own particular county medical society will have weathered through sixty-two years of a changing life on the 21st day of the present January. That speaks well for the men who started it. It speaks well for the men who kept it up. Looking back over the records, one is impressed by the fact that these men have, for the most part, been the most prominent physicians, those with the largest practices and those most respected. They it is who have year after

year breathed life into the county medical society, and it is this type of physician who the newer men find still forming the strength and mainstay of the society to-day.

What, then, does medical organization mean that it should have appealed for years past to the best men in the profession, not only in my own county, but the whole country over?

The meaning of medical organization is both simple and far-reaching. It means focusing of power. The basic principle of organization is as old as man himself. It was old when *Aesculapius* was young. Man first organized for the primitive things; for the crude, physical things, as witness the grouping into tribes and nations. From the beginning civilization and organization have worked upward hand in hand—the variety of the latter keeping even pace with the demand of the former. Thus we have come to have not only religious and political organizations, but organizations of labor and of capital, literary, social, athletic, temperance, scientific, fraternal, civic and charitable organizations and a host of others.

Thus we see medical organization is a natural product.

As the name implies, it is a dual affair. It is the science of medicine, with its honorable history of study and research and knowledge, coupled with the basic principle of organization. It means the focusing of thousands of technical minds. It means that the resultant power has been used not only for the welfare of physicians and not only for the health of a particular community, not only for the health of a particular state, but, being countrywide, its strength has been and will be utilized for the good of the nation.

WHAT IT STANDS FOR.

Medical organization stands for what its integral parts want it to stand for. What are these integral parts? We have just seen that they are the county societies. That means, in general, the 1,997 county medical societies in the United States, with an average of 35 members each; but it means to each of us, more directly and particularly, the county medical society to which we belong.

When we applaud the American Medical Association for the things for which it stands, we indirectly applaud ourselves, for we, too, have our small share in shaping its wisdom. If we criticize the American Medical Association for the things for which it stands, we indirectly criticize ourselves, for we, too, have a small share in the making of its errors. It is all in the family.

When the American Medical Association was first organized in 1847, one of the principal subjects considered was that of "raising the standard of medical education." There were no licensing or examining boards anywhere in the United States in those days. Much of all the good which has since been accomplished along these lines has been due to our organization. Furthermore, it stands not only for proper preliminary and medical education for those wishing to enter the profession, but it also stands for its own members keeping an open mind for the things which are new, while not forgetting the good things which are old.

Thus there has come to be outlined the post-graduate course for county societies and many other features, the adoption of which has resulted in profit to the county organizations.

It stands for the interchange of scientific findings at not only the county meetings, but at the district and at the state and at the yearly meetings of the American Medical Association.

Neither are the means of receiving and giving medical information limited to these personal gatherings, but each week there come to our desks the best gleanings from all the physicians in this country and others in Europe, printed in *The Journal of the American Medical Association*, a journal of high ideals, rich in material and conducted by some of the best men in the profession. Then every month we have our own *JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION*, which has passed from an experiment to a success under the able management and editorship of Dr. Albert E. Bulson, Jr. As neither of these journals is owned by a drug house, the editor does not have to use his editorial pages, his blue pencil, his scissors or his wastebasket in any way but what will permit of a satisfied ethical conscience when the day's work is over. Medical organization stands for these clean, scientific journals we are now getting.

It stands for health legislation, both national and state, which shall represent the best technical findings, tempered by the practical experience of health officers and other officials.

It stands for pure food and drug legislation. It stands for physicians themselves knowing and not guessing as to what drugs they are giving their patients. This one thing is enough to make us rejoice in organization. We undoubtedly owe a debt of gratitude to the "Council on Pharmacy and Chemistry."

It stands for a medical directory which will really perform its function of directing by sup-

plying accurate information in regard to physicians throughout the country.

It stands for each member using everything material and mental which can be of value to his patients. He can use the best out of homeopathy, physio-medics, osteopathy, New Thought, Christian Science, mental healing and all other special lines. What is required of a member, however, is that he does not "profess adherence or give support to any exclusive dogma or school." Each one of the exclusive dogmas or schools undoubtedly has good in it, but the criticism I would make is that in them the disease must fit the treatment, because the treatment can not be extended outside of definite bounds to fit the disease. A multitude of remedial measures must go unused, even though some of them might often be of greater value. That is one of the reasons why so often the best men who start out along these special lines gradually add to their ammunition against disease and death from the great storehouse of material outside of their first limited selection. They thus become one of us and we can welcome them to our organization. The existence of these special lines is not without value in bringing to our minds more forcibly the importance of some of the underlying medical facts upon which their superstructures are built. It might be interesting to add, in this connection, that the Emmanuel movement started in Boston, and now spreading over the country, has already accomplished much good, because the patient is not deprived of all things else which are of value, while getting the wonderful help which comes from a proper mental attitude.

Medical organization stands for medical ethics. It has put its approval on certain principles of ethics which have lived, with but slight alterations, for many years, winning the approbation of the great majority of the best physicians and other men of culture. The "Principles of Medical Ethics" have been printed by the American Medical Association in pamphlet form. It is both a pleasure and a profit occasionally to reread them, because they stand for the best in the relations of physicians to each other, their patients and the public.

Any county medical society can stand for anything, within broad and wholesome limits, for which it cares to stand in regard to the business part of a physician's life.

The county society stands for bringing about a better, closer personal acquaintance among the physicians in the county.

When the county society reaches its full growth it embraces all the worthy doctors in its

jurisdiction. It, therefore, must of necessity come to be recognized sooner or later by the people in the community as the authoritative source of information on matters affecting the health of the community. This does not take from the dignity or duties of the health officers, but is of value to them in their good work.

Dr. J. N. Hurty, Secretary of the State Board of Health and a member of the Indiana State Medical Association, has been doing what may be termed advanced work along these educational lines, letting the people know some of the splendid health-giving truths in medicine. His virile, clear and trenchant diction, coupled with the authority of his office, has made his work especially effective. Individually, perhaps, most of us can not be, or do not care to be, so active as Dr. Hurty in this good work. Each county society as an organization, however, has great possibilities for pointing the way or strengthening the hands of the authorities in such matters as school inspection, factory inspection, child labor, public drinking water, disposal of sewage, the health advantages of a pure food and drug law, the value of vaccination, the curability of tuberculosis in the early stages, the value of fresh air and sunlight, the frauds of quackery, the truth about patent medicines and the grave injustice to the public in breaking quarantine without the sanction of the health officer or his deputy. There may, perhaps, be other things of more value in some particular county than some I have mentioned, but enough has been said to show that individually we should take an interest and use our influence in these matters, and that, furthermore, an alert, up-to-date, conscientious, hard-working medical society stands for using its moral force and technical knowledge for the good of the county in which it exists.

I do not mean that any society should at once plunge into a multitude of things without mature and deliberate consideration. But what I do mean is, and I wish to make it as emphatic as possible, that as occasions arise we must not forget that our functions are varied, and we should not hesitate to use them for the betterment of the profession or the good of the people.

Dr. J. N. McCormack, chairman of the Committee on Organization of the American Medical Association, has been doing splendid work in helping the county societies along these lines. His talks have started or strengthened a good understanding between the societies and the public. He has done a great deal of good. He has gone through several states telling of patent medicines, the venereal problem, counter prescribing

in drug stores, sanitation, quarantine, the need of good health laws, etc., etc. He has pointed out to the public and the profession alike the menace to the community from physicians who "take no medical journals, study no new books and attend no medical associations." Ministers, lawyers, druggists, business men and others attend these lectures with the doctors, take part in the discussion and leave, knowing that the county medical society is working with them for the health of the community. They leave, knowing that the county medical society not only stands for doing all within its power for the health of the community as a whole, but that it stands for each individual member making the most out of himself, so as to be of the greatest value to the patients who enter his office. Therefore, the last and one of the best things which medical organization stands for is letting the public know what it stands for.

THE VALUE OF MEMBERSHIP.

A physician can not be a member of his state association or the American Medical Association unless he is a member of his county medical society.

A good society is a good leveler.

A physician who seldom comes in contact with other members of his profession is rather apt to get a false view of his fellow-practitioner and of himself. The one who attends society meetings is in a better position to appreciate the good in his fellow-worker and to see his own weak points. When a man sees his own weak points he is making progress toward better things.

It is of more than passing interest to remember that a majority of all the physicians in the United States are members of our county medical societies. It is of equal or greater interest to know that practically all physicians of prominence in either the state or the nation are members, and, furthermore, they are extremely apt to be the most constant and active members. This does not mean that all the 70,000 doctors in the county societies throughout the United States are physicians without fault, or that there are not good and conscientious men who have not yet joined their county societies. I do mean to say, however, that a good, conscientious physician can, on the one hand, better his county society by becoming a member of it, and that he can, on the other hand, increase his usefulness to his patients and to the community by joining an organization which stands for the things which are best in the medical profession.

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EDITORIALS

HOPE FOR MEDICAL LEGISLATION.

Let us hope that the reputed spirit of reformation that is accredited to Speaker Cannon will at least have progressed far enough to permit of his feet finding a sufficiently comfortable resting place upon the floor, rather than on the table, when next he is waited upon by a reputable and representative commission of medical men in the interests of public health. His boorish and resentful attitude may be likened to that of one of the councilmen of a certain city of Indiana who, after delivering himself of a volume of tobacco juice that made the corner of the committee chamber look as though it had been recently traversed by a street flushing wagon, remarked that his babies had fed on tin can milk twenty years ago and lived, and so he did not see why the city was in any need of a milk ordinance that contained a bottling clause.

With as intelligent a governor as the newly-elected one in our state, it is fair to presume that there exists a greater opportunity than ever before for the enactment of the measures of reform along medical lines that are so sorely needed. Medical inspection of schools should be compulsory for every rural district of our state, just as truly as it should prevail in every town and city. And if such inspection were demanded by statute there would be less heard of the "no money" cry from the various municipalities, a cry that from the standpoint of social economics is as absurd as it is inhuman. Which is the more conservative from a financial standpoint, to provide "certificates of death" with the attendant funeral expenses and potential loss to the state of a valuable citizen, a wage earner, and an industrial unit, or "certificates of life" at a few cents per capita for the little ones who bring life and happiness to our homes and later prosperity and wealth to our state? Where is there the miserly taxpayer who would begrudge the fraction of a mill to save his neighbor's child from an untimely grave? Certainly such a one would have merited the contempt of Scott when he asked:

"Breathes there a man with soul so dead,
 Who never to himself hath said:
 'This is my own, my native land?' "

And our state has been equally dilatory in dealing with the nostrum evil, quackery and charlatanism. True it is that the people have a right to be humbugged if they choose, but they also have a right to be informed concerning the lifelong effects of such humbuggery upon themselves and their offspring. The reputable medical profession stands ever ready and willing to furnish such information, individually and through the efficient services of the state, county and city boards of health, but without the cooperation of an intelligent legislative branch what can be accomplished? In the face of so much opposition many things have been accomplished, but more yet remains to put our state where she rightfully belongs—in the top rank of those states that have officially taken cognizance of the importance of preventive medicine. With an international reputation for the highest educational ideals, the State of Indiana deserves a more consistent place in state medicine.

Give us a system of licensure wherein the slogan shall be, not how best to evade the few prevailing restrictions or to meet the minimum, loose requirements, but how most effectively to reduce the existing evils and prevent the birth of new wrongs. A state board of medical registration and examination should be just as vitally interested in the extinction of fraud and dishonesty in the practice of medicine as the state board of health is in reducing morbidity and mortality. And yet our patent medicine concerns continue to flourish, our quacks are permitted to go on advertising and practicing lies day by day until all the blood money has been drawn from a particular field, after which they are allowed to transfer, unmolested and unexposed, to a more innocent community.

Who is to blame for these palpable and gross abuses of an uninformed public? The medical profession is willing to assume a certain responsibility and is bending its best efforts toward fulfilling its obligation to the people of our state. Will the legislature do as much?

INSURANCE FOR THE UNEMPLOYED.

From meager little Switzerland comes a lesson to the world, the need for which has been more keenly felt during the past year than for some time. Many ways have been suggested for relieving the distress of the army of unemployed, but the wisest so far seems to be the frugal and

far-sighted policy of the Swiss, which consists in inducing laborers in active employment to join what is called a Labor Insurance Institution. Quoting from the *Nineteenth Century and After* (London), *The Literary Digest*¹ says: "Any man who lives in Bern, whether a Swiss subject or not, may now insure against unemployment in the municipal bureau, providing he is able to work and not above 60 years of age. All that he has to do is to apply to the bureau, either directly or through his employer or his union, for an insurance book, and fasten into it every month an insurance stamp of the value of 70 centimes. In return for these 70 centimes a month he secures the right to a money allowance for every day, up to sixty days, that he is out of work during the months of December, January and February, provided that he has been in work for at least six months in the course of the year; provided, also, that he has not lost his work through laziness, disorderly conduct, or any other fault of his own, and that he has not refused work offered to him on reasonable conditions. A man who is unemployed because he is unemployable, whether from illness or any other cause, can not claim an allowance; nor can he who is out on a strike, or who has belonged to the bureau for less than eight months, or who is in arrears with his fees. For the first thirty days the unemployed allowance is a franc and a half a day, each, for men who are alone-standing, or two francs for those who have others dependent on them, and for the remaining thirty days it is as much as the directors can afford to make it—anything from 80 centimes to a franc and a half. If the directors refuse to grant a man an allowance, or if they reduce his allowance at the end of thirty days below what he thinks it ought to be, he may appeal against them to the Court of Trade. The unemployed elect two of themselves to watch over their interests and see that each of them receives his due."

In connection with this Insurance Bureau, there is one of Labor, by which applicants are aided in securing employment, which found places in 1906-7 for 8,365 of the 15,509 applicants. The cost of operation is kept at a minimum in order that the maximum amount may be utilized for the original purpose of the organization.

With such a force in existence untold suffering might be saved the families of many honest laboring men in just such an emergency as the past year has witnessed. Besides providing an assurance that his little ones were to be at least

kept warm and fed, every man should consider it a privilege to belong to such an organization for the simple reason that he would be ineligible were he not a reasonably faithful worker. The very fact of his membership in such an association should be a recommendation to an employer.

THE ROLE OF THE GONOCOCCUS IN POSTPARTUM INFECTION.

That the gonococcus plays a far greater part in the etiology of pelvic diseases of women and hence of obstetric complications than is usually considered has been maintained for some time by pathologists and bacteriologists. Further proof of such fact is at hand from the article of Gurd on "The Gonococcus as a Factor in Infections Following Abortion or Full-Term Delivery,"¹ the data being taken from the service of the pathological laboratory of the Montreal General Hospital. Besides his own experience, he quotes that of Duhrssen, Bumm, and others, to prove that the normal vaginal, cervical and urethral mucous membrane is not attacked by the ordinary pyogenic cocci.

Granted the prevalence of the gonococcus in modern society, which has been amply proven, it becomes obvious that the necessary factor is at hand so to reduce the resistance of the tissues of the pelvic outlet that they fall an easy prey to the influence of the streptococcus, staphylococcus, *Bacillus coli communis*, and other bacteria which might be isolated from a relatively normal vaginal secretion. A careful examination of the lochia at the onset of fever, Gurd believes, would reveal the gonococcus in a large number of cases, the germ lying dormant until the bruising effects of labor afford the desired opportunity for awakening. Mortality is no criterion of the degree of morbidity in these cases, for often the parturient runs a fever of a few days, followed by an apparently normal convalescence, only to return to the gynecologist in a few weeks or months the victim of a pyosalpinx, pelvic peritonitis or abscess. And the author pertinently asks: "How rarely is a pelvic abscess or pyosalpinx found in women who have never been pregnant?"

That the gonococcus is a more frequent inhabitant of the vaginal tract than would often be revealed by mere physical signs is proven by the author's series of examinations of the vaginal discharge of 113 women, in which the gonococcus was isolated fifty-two times, these women being of the average class applying for treatment for pelvic disease at hospital clinics.

1. Dec. 12, 1908, pp. 885-6.

1. Am. Jour. Med. Sc., December, 1908, pp. 868-880.

Of a series of 20 cases of severe endometritis following abortion or full-term labor, in five the gonococcus was definitely isolated and in one it was almost certainly present. Although only one of the cases infected with the gonococcus was fatal, and that the subject of a virulent secondary streptococcal infection, yet all suffered from high fever and rapid pulse and five had chills. In practically all the cases the onset of the fever occurred early and lasted from one to two weeks.

Although the examination of vaginal discharges of acute vaginitis shows often the other pyogenic cocci, as streptococcus and pneumococcus, in such numbers as to make them appear the only organism present, yet the history, course of the disease and subsequent examinations almost invariably show the gonococcus to be the primary pathogenic factor.

Several case histories are cited by the author to prove that such a combination of the Neisserian organism with one or more pyogenic bacteria occurs in the endometritis following childbirth, and this despite the most careful technic during delivery. Attention is called to the experience of all physicians of large obstetric experience, wherein cases occur of fever, at times severe, following spontaneous labor, in which absolutely no internal examination had been made. Likewise fever most frequently presents in unmarried girls and gonorrhea is more common among women illegitimately pregnant.

Though a common inhabitant of the lower vagina and vulva, the streptococcus is rarely found in the upper part of the normal vagina, and Williams states "that in those cases (in which pathogenic organisms are found in the upper vagina) the infection is probably carried up by the instrument made use of in procuring material for examination."

Autoinfection from chronic gonorrhea must ever be borne in mind. The following succinct conclusions are presented: "(1) The gonococcus, either alone or as a primary infecting agent, plays a much more important rôle in the production of puerperal fever than is usually appreciated by most observers; (2) various micro-organisms, especially the streptococcus and *Bacillus coli communis*, are usually present about the vaginal outlet, although apparently infrequently found in the upper part of the vagina of the healthy woman. These organisms are ever ready to attack the tissue whose resistance has been destroyed by the action of the gonococcus. As corollaries there follow (a) the necessity for the most careful examination of the history of the patient and of the vaginal discharge early in pregnancy in all cases presenting the least

grounds for suspicion; (b) the necessity for more than ordinary caution in examining externally all pregnant women presenting even the slightest evidence of an inflammatory condition."

Though not absolutely germane to the immediate subject in hand, it is to be regretted that the author has not given us the results of investigation into the further effects of the infection in these women, viz.: how many of them subsequently remained sterile and how many of the babies were the subjects of ophthalmia neonatorum and possibly blindness. When one stops to reflect that it is estimated conservatively that 70 per cent. of all males of our country either have or at some time past have had a gonorrhreal infection, it is not surprising that 60 per cent. of all gynecological operations and 25 per cent. of all blindness owe their existence to this form of infection. And this without mentioning the months of chronic invalidism and suffering caused many an innocent woman.

NEEDED LEGISLATION IN WHICH THE MEDICAL PROFESSION IS INTERESTED.

THE Indiana Legislature, now in session, will be called upon to make several appropriations for enterprises in which the medical profession is particularly interested. One of the most important appropriations is that for carrying on the work of the State Board of Health. It is quite true that Indiana has of late years been more liberal in furnishing means for the use of the board, but the state will have to be much more liberal than it has been in the past if the record of other no more populous or wealthy states is approached. The work of our health boards is in the line of not only the prevention of disease and the saving of human lives and adding to the comfort and happiness of our people, but is in the line of a demonstrable saving of money to the state. President Roosevelt, in one of his messages to Congress, has referred to the statement often made in this country that we pay more attention to the saving of our hogs than we do to the saving of the lives of our children, and when we consider the enormous sums spent in trying to stamp out hog cholera or other diseases which carry off domestic animals, and the relatively small sums spent in trying to stamp out communicable diseases which carry off human beings, we realize that the saying quoted by the President is quite true. Even with small appropriations for the Indiana State Board of Health much has been accomplished by Secretary Hurty,

who has honestly earned the record of being one of the most competent, efficient and enthusiastic health officers in the United States. But Dr. Hurty has been unable to accomplish all that should be accomplished for the state and its people because of lack of funds for carrying on his work and lax requirements pertaining to the selection of county health officers and the enforcement of public health measures. The members of the legislature should be made to understand how valuable the work of the Board of Health is, and especially what it means in dollars and cents saved. To the average legislator nothing appeals except a proposition placed on a basis of dollars and cents, and, therefore, the necessity for increased funds for the Board of Health should be placed on this basis in the hope that a more liberal appropriation will be secured.

Another enterprise which for the first time will require aid from the state is the medical department of the Indiana University, and here the question of an appropriation should meet with the most liberal consideration. Our educational institutions should be the pride of every citizen of Indiana, and they require and should have liberal aid in an endeavor to place them in the front rank of institutions of learning. The Indiana University has broadened out by adding to its regular courses that of medicine, and now assumes the functions of an institution which it was intended by its promoters should afford medical instruction. It is the only institution of learning in the state which gives a complete medical course, and, starting out under the most favorable circumstances as pertains to the good will and support of the medical profession and public, it is entitled to and should receive sufficient state aid to place it in the front rank of institutions where the art and science of medicine is taught. Indiana is a populous and rich state, and no false economy should be practiced in dealing with this question.

Another subject which will probably come before the present legislature for consideration is that of repealing or amending the medical practice act. We are disposed to believe that the present medical law is a fairly good one if suitably enforced, but in considering the many evasions or violations of the law which occur in almost if not all of the counties of the state there is little wonder that many believe the law to be very ineffective if not inadequate. It can not be said that the law has been responsible for raising the medical standard of the state, for that has been accomplished by the medical schools of the

country, and the fact that incompetents and morally unworthy persons have been licensed to practice in the state does not indicate that the law has done much toward elevating or even maintaining any very high standard. It is quite possible that the law does not afford ways and means for effectively enforcing its provisions or properly maintaining a suitable standard. If this is the case, then the law should be so amended that the difficulties can be overcome. If the law requires no alteration, but requires some one to enforce it, then the legislature or the governor should take the necessary steps to secure a board that will enforce the law. There is an urgent need for some action which will insure for the people of the state the benefits and protection which it is intended the medical law should give us. There is no reason why the medical quacks and incompetents should thrive in Indiana by violating the law, as is the case now, and some measures should be adopted whereby this condition of things can be changed.

The furnishing of aid to state institutions for the care of the tuberculous, the epileptic, the insane and the inebriate will also come up in the present legislature for consideration. These enterprises all deserve liberal appropriations in the interest of humanity as well as in the interest of economy. These institutions can be the means of saving for the state many a useful life of actual money value to the state that would otherwise be lost.

The physicians of Indiana can aid all of the enterprises enumerated by bringing influence to bear upon legislators in the interest of liberal appropriations, and we urge the members of the Association to become actively interested in these worthy causes. The time to act is now, for in a few weeks or perhaps in a few days it will be too late.

EDITORIAL NOTES

WE desire to call attention to our advertising department devoted to commercial announcements. If you have anything to sell make an announcement in that department.

WE expect to publish in our next number a list of the members of the Association. See that your name is not left out because you failed to pay your dues for 1909.

THE new American Medical Directory will announce that Indiana, with 92 counties, has, in round numbers, a population of 2,615,000; that there are 5,000 physicians in the state, and that the Indiana State Medical Association has a membership of 2,650. We might add that with the new applications under consideration the membership in the Association ought to be increased to nearly 3,000 with the close of this month.

THE Indianapolis Medical Society issues a very creditable monthly bulletin containing announcements of the society, an alphabetical list of the members, and program for the month. The plan could be profitably followed by other large societies in the state, but we hope that no other societies will accept nostrum advertising for their programs, as we also hope that in the near future the Indianapolis Medical Society will bar such advertising from its bulletin.

A MEMBERSHIP card, printed in two colors and numbered, is now issued to each member paying the Association dues for this year. The card certifies that the member is in good standing in the Association for the year 1909, is entitled to register at the Terre Haute session and to receive THE JOURNAL until Jan. 1, 1910. A duplicate record of the cards issued by the secretary is furnished us and that record constitutes the mailing list for THE JOURNAL. If any member fails to receive THE JOURNAL regularly he should notify us at once, and in doing so give number of his membership card and required information as to any error in name or change of address.

HAVE YOU PAID YOUR DUES? IF NOT, WHY NOT? Dr. F. C. Heath, secretary of the Indiana State Medical Association, has sent out official notices to the secretaries of all county medical societies to the effect that all dues must be paid before February 1 if membership in good standing in the Association is to be retained. This means that this is the last number of THE JOURNAL which will be sent to those who have not paid the Association dues before the first of next month, when our mailing list is revised. This information has been published in previous issues of THE JOURNAL and, therefore, there is no good reason why the dues from all the members of the Association should not be in the hands of the secretary by the last of this month.

THE enterprising, smooth-talking and pleasant-mannered female who has been introducing a proprietary remedy called "Peptol" to the medical profession in Indiana has sent us her card, presumably as an indication that she appreciates the little gratuitous advertising we last month gave her and the preparation she is introducing. True to prophecy, Peptol has been advertised to the laity, in public press, demonstrated to gaping crowds at drug stores, and now occupies a conspicuous place on shelves along side of Hood's Sarsaparilla, Piso's Pile Cure, Cascarets and numerous other remedies which "work while you sleep" or operate in some other miraculous manner. We hope that the gratuitous advertising we have given Peptol will result in keeping the medical men of Indiana from forming a very close acquaintance with it until it seems more worthy of recognition than at present.

THIRTY-SIX life insurance companies are paying a \$5 rate for life insurance examinations. There is no good reason why all life insurance companies should not do likewise. They would do so if medical men were united in insisting upon payment of \$5 for a complete examination such as is required by the average life insurance company. The only reason that anything less than a \$5 rate prevails is that there are some doctors who value their services so lightly that they are willing to accept most anything in payment for the same. Fortunately the medical profession is slowly awakening to the fact that good services are worth respectable fees, and that the higher cost of living at the present time, together with increased cost of obtaining a medical education and competency to practice medicine, deserves consideration in the way of increased fees. In Texas seventy-nine counties are enforcing the \$5 flat rate for insurance examinations, and in Kentucky a majority of the counties of the state are also insisting upon the \$5 rate. In Indiana a few counties have taken this stand, and it is hoped that other counties will fall in line.

CONCERNING dangers from food adulteration and other sources, President Roosevelt has given expression to the following:

"The dangers to public health from food adulteration and from many other sources, such as the menace to the physical, mental and moral development of children from child labor, should be met and overcome. There are numerous diseases which are now known to be preventable which are nevertheless not prevented. The re-

cent International Congress on Tuberculosis has made us painfully aware of the inadequacy of American public health legislation. This nation can not afford to lag behind in the worldwide battle now being waged by all civilized people with the microscopic foes of mankind, nor ought we longer to ignore the reproach that this government takes more pains to protect the lives of hogs and of cattle than of human beings. The first legislative step to be taken is that for the concentration of the proper bureaus into one of the existing departments. I, therefore, urgently recommend the passage of a bill which shall authorize a redistribution of the bureaus which shall best accomplish this end."

WHY not specify in the filling of prescriptions the drugs and chemicals used shall be of a certain make known to be thoroughly reliable as to quality? Many pharmacists buy their drugs and chemicals where they can buy the cheapest, and many manufacturers obtain patronage from the pharmacists through such inducements, but with a correspondingly reduced quality of the goods furnished. Such firms pay little attention to the medical profession because medical men are not directly patrons. But if medical men will insist upon quality of ingredients in filling their prescriptions then the pharmacists of necessity will be obliged to patronize manufacturers who maintain a high standard. It is pertinent for us to ask, Why not insist that the drugs and chemicals manufactured by some of the firms advertising in *THE JOURNAL* be used in compounding your prescriptions? We refuse to carry the advertising of any but trustworthy concerns, and you are safe in recommending the products of any of our advertising patrons. Furthermore, such firms should have your preference when they spend money in advertising in *THE JOURNAL* which you own and the success of which depends in some measure upon the advertising income.

MR. COUNTY SECRETARY: This is the time of year when you should get busy in an effort to increase the membership in your society. Do not wait for eligible doctors to come forward with applications and dues in their hands or you will be disappointed. Go to them and cordially but fully explain to them the benefits to be derived from membership in your society and in the State Association, not forgetting to mention that *THE JOURNAL* is one of the perquisites which comes from membership. Plead with them, pray with them, or use any persuasive and mild-man-

nered means of securing applications (and dues) from them. But do not take a club to them, for the time has passed when it is necessary to knock down and drag the lifeless body of any man into a medical society. If you have sufficient patience and exhibit the proper amount of tact you can secure any sensible eligible man as a member of your society. If you have not sufficient time, energy and interest to do this work, then deputize some live man in your society to do the work for you, but see that the work is done. We have not anything to do but practice medicine, edit and manage a medical journal, and do a few other odd jobs, so if you need any outside help call upon us and we will willingly if not cheerfully do our best to render assistance.

ANOTHER example of misplaced municipal economy is that offered by the city council of Chicago in its threatened failure to provide the necessary appropriation for the continuance of the work of the school nurses. Installed as an emergency measure by Mayor Busse in response to the report of the board of education, these forty nurses have for several months been daily working among the more congested districts, going over the physical condition of the pupils whose numbers were too great to allow of the work being done by the teachers alone. The nurses are neither expected to diagnose cases nor institute treatment, but immediately a suspicious case is found the case is referred to the medical inspector of schools. An example of the appropriateness of such a work is shown by the recent discovery of a child who had been returned to school while still desquamating from an attack of scarlet fever. The amount saved the community in the prevention of a possible epidemic from this single source would probably more than suffice to meet the expenses of this wise prophylactic measure for a month's time, not to mention the numerous other achievements of equal importance to the public welfare.

Such short-sighted policies on the part of governing bodies are on a par with those of our state in neglecting to make medical inspection of schools compulsory in every municipality and district.

A NOVEL yet productive way of contributing a mite to the cause of fighting tuberculosis is that adopted by the American Red Cross Society, with headquarters at Washington and thirty-three state Red Cross branches. A Christmas stamp, designed by Howard Pyle, was put out, to be pasted on letters and packets, with the hope that

the trivial cost price of one cent would burden no one and yet would afford one more channel for expression of the holiday spirit. No one is expected to realize any profit from the sale of these stamps, so that the net proceeds may be kept at a maximum amount to be used toward establishing state tuberculosis camps and in assisting the worthy poor to avail themselves of the benefits of such camps. In our own state the governor-elect is a member of the executive committee of the state branch, which we feel is both characteristic of his broad sympathy for unfortunate humanity and an earnest of the genuineness of the enterprise.

With the spirit of benevolence pervading the Yuletide atmosphere, when every human being feels kindly toward each of his fellow-men, an opportunity to help the less fortunate ones at so little cost should be eagerly grasped, and it is sincerely hoped that with the season past and accounts cast up it will be found that a handsome sum has been netted for this far-reaching and most worthy enterprise.

One of the most satisfactory features of the scheme is that the money is to be used in that state from which it emanated.

ONE of the grossest drug frauds of modern times has recently been unearthed in Russia, according to a report in the *London Lancet* of Nov. 28, 1908.

Operating over a large part of Russia, an Odessa manufactory was found by the police to be turning out quantities of pseudo-German preparations under exact imitation labels and in like bottles to those of the *bona fide* German makers. The amount of business done by the Odessa plant alone was estimated at \$1,000,000. Further investigation revealed the fact that over 58 per cent. of pharmaceutical stores were selling false wares. Some of the insults offered were xeroform, made from bricks, sirolin from water, sugar and color, and thiocol, tannalbin, and somatose from mixtures of soap, lime and dyes. Table salt and other equally inexpensive articles had been substituted for quinin, phenacetin and pyramidon.

It is unnecessary, however, to direct our attention to so distant a country as Russia to find such abuses, for far greater insults are being daily offered to the intelligence of the American people. And still about the only difference found in the ultimate casting up of accounts is that some of our own patent medicine concerns and "medical institutes" are gracious enough to throw in gratis with their admixtures of cheap drugs

and poor alcohol the valuable (?) adviee of their "expert and scientific physicians who have made a careful and exhaustive analysis of each individual case." What a commentary this is on the good sense and instincts of an otherwise intelligent people, that it should continue to foster an evil, the victims of which become public property at so much per thousand names and addresses!

FOLLOWING the publication of our December number we received many complimentary letters from various parts of the state concerning the year's work of THE JOURNAL. We are pleased to know that so many members of the Association are satisfied with THE JOURNAL, but we are especially pleased with a disinterested opinion which comes from the well-known and accomplished editor of *The Texas Journal of Medicine*, and we, therefore, reproduce his letter:

State Medical Association of Texas,
Fort Worth, Tex., Dec. 22, 1908.

Dr. Albert E. Bulson, Jr., 219 W. Wayne St., Fort Wayne, Ind.:

Dear Dr. Bulson:—I have reviewed with great pleasure your State Journal for December, and can not refrain from writing you at the close of your year's efforts to congratulate you on the typography, contents and advertising of the new Indiana journal. It is splendidly printed, the papers are good, and your editorials have uniformly been of a high order of excellence. I like your spirit, and it shows that you have the interests of the state profession most deeply at heart.

As editors, I am sure we compare each of our departments, and in going over your journal I have been particularly pleased, in comparison with the Texas publication, with your society proceedings. Of course, it is easier to reproduce society proceedings where there are ninety-two counties than it is where there are nearly twice that number. I like the résumé of papers presented, which makes the county society report something more than a collection of dry facts, election of members, officers, etc. I shall in the coming year try to follow your good example in this respect.

With kind regards and best wishes for the new year, I beg to remain,

Very truly yours, I. C. CHASE.

The assistant editor, Dr. Weaver, is also deserving of a share of whatever credit is due for making THE JOURNAL what it is.

THE Fort Wayne Medical Society has adopted what has been termed a "minimum fee table" to govern members of the medical profession in the city of Fort Wayne in charges for professional services rendered. The following is the schedule:

Day visit	\$1.50
Night visit	3.00
Ordinary office consultation and advice.....	1.00
Advice or prescription by telephone.....	1.00
Ostetrics case, uncomplicated.....	15.00
In all cases where medicine is furnished an extra charge shall be made for the same.	

At the bottom of the fee table is the following note: "This schedule is advisory. However, these provisions will be made the minimum standard of charges by *competent* members of the Fort Wayne medical profession. There are some physicians who, because of deficient skill and training, conscientiously feel that their services are not worth the above-named sums, and, of course, these men will charge less for their work."

Printed copies of the fee table have been distributed to all members of the medical profession of the city of Fort Wayne to be conspicuously posted in offices, and the fee table has been published in all of the daily papers of the city of Fort Wayne, together with the announcement that the fee table will become operative on and after Jan. 1, 1909.

The unique feature of the fee table is the appended note which places every physician in the position whereby he must maintain fees or face the charge of believing himself incompetent and, therefore, entitled to less than the fees charged by competent men.

THE State Board of Health should certainly have the benefit of the influence and active support of every physician in its defense of the Indiana Pure Food Law, which is about to be tested in the Federal Court at Indianapolis. Suit has been entered at the instance of Williams Brothers, of Detroit, Mich., picklers and preservers, and the Curtice Brothers Company, of Rochester, N. Y., food manufacturers, against H. E. Barnard, state food and drug commissioner. Dr. J. N. Hurty, secretary of the State Board of Health, and the other members of the board. Ostensibly the action is brought on a petition for a temporary restraining order to prevent the enforcement of that part of the pure food law relating to the use of benzoate of soda as a preservative, but in reality the purpose is to test the constitutionality of the present law, which, of itself, is a model one and is being made the foundation for similar ones in many states of the Union.

The claim is set up by the plaintiffs that their sales in the State of Indiana have been greatly damaged by reason of the restriction of the law that such goods as are preserved by the use of benzoate of soda must be labelled "adulterated." and they assert that fifteen years of experience in the use of this preservative have proven it to be perfectly harmless and the products preserved therein perfectly clean and wholesome. Similar suits instituted in Michigan and North Dakota have failed of their purpose, and the restrictions of the law sustained, and it would be a public

calamity if the excellent law of our own state were not upheld by our courts.

If it be true that benzoate of soda in the quantities used is perfectly harmless, it is a simple matter for the manufacturers so to state on their labels, together with the exact amount contained in each package. As a matter of fact, however, the benzoate of soda is equally powerful as an antiseptic with the salicylate of soda, though possibly its effects in equal quantities are slightly more innocuous. Indeed, its therapeutic indications are the same as those of sodium salicylate for which it is often employed as a substitute. Some idea of its germicidal power may be gained from the knowledge that benzoic acid, from which the sodium salt is derived, will prevent the growth of putrefactive bacteria in a solution of 1:1000, and its administration is sometimes followed by urticaria or an erythematous condition of the skin. So that there is obviously no injustice done in merely asking a manufacturer to be frank enough to tell just how much of a rather powerful drug he is making use of in the preservation of his wares. Possibly with the enforcement of so excellent a law there will be fewer cases of so-called food-poisoning which might owe their origin to excessive quantities of sodium benzoate and similar preservatives.

DEATHS

DR. I. N. PLUMMER, the oldest physician in Shoals, died from heart failure at his home, December 22, at the age of 75 years.

DR. B. C. STEVENS, of Logansport, died suddenly of heart failure at his home December 22. Dr. Stevens had been troubled with heart disease for several years. He was born near Montreal, Canada, of American parents, and came to Logansport in 1869. He graduated from the University of Michigan Medical School in 1871. He was county physician eight years and coroner one term.

DR. SAMUEL R. SEAWRIGHT, one of the pioneer physicians of Indiana, died at his home in Lafayette, December 20, after practicing medicine in Indiana for nearly fifty-five years, at the age of 84 years. When a lad Dr. Seawright studied under Dr. Deming, of Lafayette. He was a graduate of the Indiana Medical College and Rush Medical College. He served a term as coroner, and was a member of the Pension Board.

PERSONALS

DR. L. S. HIRT, of Bluffton, has decided to relocate in Brazil.

DR. C. V. INGLE, of Evansville, has returned from an eastern trip.

DR. J. C. GIFFORD, of Brazil, is spending the winter at Manatee, Fla.

DR. C. M. KENNEDY, of Camden, has been elected coroner of Carroll County.

DR. L. B. HILL, of Seymour, has been re-elected representative for two years.

DR. J. B. BLICKENSTOFF, who located in Flora last spring, has removed to Wolcott, Ind.

DR. J. H. McCUTCCHAN, of Evansville, is taking a trip abroad for his health, following a severe illness.

DR. JOHN C. PANNEBORG, of Hammond, is still seriously ill, having been compelled to give up his practice early in the past year.

DR. H. J. PIERCE, of Clooland, who was under treatment at Union Hospital early in December, has recovered and resumed practice.

DR. EVERETT ZARING, a member of the Pike County Medical Society, has removed his office from Beelsville, Putnam County, to New Phalia, Knox County.

DR. J. T. KIME, of Petersburg, who recently underwent an operation for a fulminant appendicitis, has almost fully recovered and has resumed his practice.

DR. G. F. LEWIS, of Asherville, suffered the loss of office and residence by fire December 1. He decided not to rebuild there but to remove to Plainfield, Hendricks County.

DR. A. M. HAYDEN, of Evansville, visited the Mayo clinic at Rochester, Minn., during the first part of December, and then left for New York City, where he spent the holidays with his daughter.

DR. M. RAVDIN, of Evansville, has returned from Vienna, where he spent several months in eye and ear work. He was accompanied by Dr. L. Heimann, also of Evansville, who did general work.

DR. W. R. DAVIDSON, councilor of the First District, has associated himself with Dr. James Y. Welborn and Dr. Edwin Walker in practice and the management of the Evansville Sanitarium.

DR. R. W. HAWKINS, of Brazil, had his office and library seriously damaged by fire in the Krugan Block, December 10, and has reopened his office in the Tulley Block, on National Avenue.

DR. C. M. KENNEDY, of Camden, president of the Carroll County Medical Society, and Dr. Eva Nebeker, of Attica, were united in marriage Dec. 2, 1908. They were classmates at the Indiana Medical College.

DR. ROBERT DRYBOROUGH, a brilliant veterinarian of Evansville, died December 23. He was formerly a student in medicine at the University of Edinborough, but after the second year took up the study of veterinary medicine.

DR. WILLIAM S. EHRICH has transferred his membership from the Jefferson County Medical Society (Louisville, Ky.) to Vanderburgh County Medical Society. He was formerly an instructor in the Kentucky School of Medicine. His practice is limited to diseases of the skin and genitourinary organs.

DR. J. Y. WELBORN, of Evansville, has been successful in defending a personal injury suit caused by knocking a man from his bicycle and breaking his arm. The man turned directly into the car, and after the injury Dr. Welborn took good care of him. The suit was delayed nearly two years, and the case was so weak that it took the jury four minutes to find for the defense.

DRS. J. C. McClurkin and W. E. McCool, of Evansville, were recently successful in defending a malpractice suit. During a pelvic operation hot water bottles were applied to the patient's feet without their knowledge. Owing to low vitality, severe burns followed and the usual pettifogging lawyer took the case. The first trial was terminated by peremptory instructions from the court; the second, brought on slightly different charges, brought quick judgment.

NEWS, NOTES AND COMMENTS

EVERY physician practicing medicine in Union County is a member of the Union County Medical Society.

HENRY L. WALLACE, Crawfordsville, has given \$7,000 to the L. L. Culver Union Hospital for the maintenance of the Susan E. Wallace free bed.

A BEAUTIFUL photographically illustrated book describing the Mount Clemens Mineral Springs has been issued and is being sent free to medical men who mail request to F. R. Eastman, Mount Clemens, Mich.

THE next meeting of the Eighth District Medical Society will be held in Winchester, Ind., April 22, 1909. The meeting will be devoted to the consideration of "Suggestive Therapeutics." Prof. E. B. Lindley, of the Department of Philosophy of Indiana University, will be the guest of the society at the morning session. The afternoon session will be devoted to a symposium that will consider special features of this most important and much neglected remedial measure.

CHARLES WITTY, said to be a graduate of the Weltmer School, Nevada, Mo., who was tried in Vincennes for practicing medicine without a license, is said to have been found guilty and fined \$25 and costs. He claims that the school under which he practices is back of him and will take an appeal to the Circuit Court and still higher if necessary. According to the testimony brought forth, Dr. Witty had no license to practice medicine. It was also brought out that he had attended the college of his choice but a few months only.

SAUNDERS ILLUSTRATED CATALOGUE, published by the W. B. Saunders Company, 1925 Walnut St., Philadelphia, sent free of all expense to applicants.

This is a revision of the regular Saunders Illustrated Catalogue, and contains reference to some twenty-five new books which have recently come from press. Many of the illustrations are works of art, as they are printed in colors on a high grade of paper. The catalogue is handsomely bound and will prove a valuable addition to any medical man's library.

SOCIETY PROCEEDINGS

ALLEN COUNTY.

FORT WAYNE MEDICAL SOCIETY.

(Meeting of Nov. 24, 1908.)

Society met in regular session in the Assembly Room with twenty-one members present. Society called to order by President Calvin. Minutes of two previous meetings read and approved.

Dr. C. H. English presented a boy who about two years ago fell from a railroad train, suffering a fracture of the skull, and was later presented to the society with a facial paralysis. Now there is practically no evidence of paralysis. He was not operated on, and Nature was allowed to repair the damage. Dr. English said he thought the course pursued in this case was a wise one.

Melanotic Sarcoma of Mesentery and Intestines.—Case report and presentation of pathological specimen by Dr. C. H. English. Patient, widow, age 51, mother of seven children. Her parents died between the ages of 40 and 50, the cause of their deaths not known. Four brothers and two sisters living, all in good health. No history of specific disease could be discovered. Her health up to 50 was unusually good, being muscular, robust and strong; height 5 ft. 4 in., weight about 150. She was a very pronounced brunette, having black eyes and black hair.

About the age of 50 patient began to complain of pain in right knee, which was pronounced tubercular in character, and after being treated for some time knee was amputated at the junction of middle and lower thirds. The stump healed well, and there was no further apparent trouble from that source. At the age of 53 a small round tumor was removed from the right labium, the pathological character of this tumor not being ascertained, and there was no recurrence about the vulva or genital tract. Dr. English first saw the patient at her home February 15, 1908. At this time she complained of pain in the abdomen, more pronounced in the region of the liver. The abdomen was rather large, but no tumor could be discovered. Liver dulness was not much increased over normal, and the liver and abdomen were not tender to pressure. The bowels were inclined at this time to be constipated, and the patient suffered from nausea, and had very little desire for food. Temperature normal, pulse 95. She did not seem very ill, but there was an indescribable eadaverous appearance of the skin. Chemical analysis of the urine was negative. Not being able to make a diagnosis, supportive treatment was instituted with the hope of improving her digestion. Her stomach gradually became more intolerant of food, and she was removed to the hospital for treatment of her stomach. The stomach was washed out with saline solution every one or two days, but in spite of this she gradually grew worse, vomiting became frequent and constipation became pronounced. Dr. Duemling, who had amputated the leg, was called into the case, and an exploratory operation was done, with the hope of relief. On opening the abdomen, about five inches of bowel (duodenum) was found telescoped, and was resected, and a Murphy button used. Further examination revealed the omentum to be studded with small, dark colored nodules, beginning at the stomach and down the entire length of its attachment to the bowel. The abdomen was closed, and patient died eight hours later.

At autopsy the dark colored nodules, all along the bowel, were found to be formed in clusters of from three to six or seven in a cluster. The nodules in each cluster varied in size from three-fourths of an inch down to a pin head. The larger nodule would be situated between the mucosa and sub-mucosa of the bowel, and the next in size would be just at the margin of the mesentery, and so on in, toward the central part of the mesentery, two to four inches, depending on the number of nodules in each cluster.

This condition obtained along the entire length of the intestine. None were found in the stomach or other viscera. Specimens were referred to Dr. Rhamy, who pronounced the condition melanotic sarcoma of the mesentery and intestines.

Dr. English said that he believed the tumor in the labium was the first, and that the growths in the mesentery were metastatic growths. He then quoted the following on the subject: J. Bland Sutton says: "The majority of these melanotic tumors exhibit the structure and clinical features of sarcomata, but some which arise from the eye are carcinomata." Excess of pigment is termed melanism, which is just the reverse from albinism. All tumors of whatever character should be looked upon with suspicion, and removed early. It is better policy to go to the extreme in early operation than to delay.

Opening the discussion, Dr. Bruggeman said he did not think this metastatic condition was from the labium but that the patient first suffered from sarcoma of the upper end of the tibia.

Dr. Weaver said that ordinarily the liver is the most frequent seat of metastasis in melanotic sarcoma, but lately primary growth has been found in the common duct.

Dr. English closed the discussion.

Persistent Thyro-glossal Duct.—Case report by Dr. Bruggeman. Patient, girl, was seen first three or four years ago. She had always been well as a child, but developed small cystic mass below the hyoid bone. It opened and discharged mucus, leaving fistulous tract until one week ago. This was then dissected out to the median line of the hyoid bone. The persistence of the thyroglossal duct in whole or in part is unusual.

Dr. Van Buskirk said that two kinds of fistulae are found in the neck, those in the lateral part and those in the median line. The lateral fistulae come from persistence of the brachial duct, and sometimes open in the median line. There were branches in this fistulous tract, which is rather distinctive of persistence of the thyroglossal duct.

Dr. Van Buskirk made a motion that the tabled motion concerning the report of the committee appointed to review papers on fees, collections, etc., be taken from the table. Carried. Dr. McCaskey then moved that the report of the committee be accepted and the committee continued to work out the details. Motion carried.

Thanksgiving greetings from Dr. Chas. E. Barnett, who is at present in Vienna, Austria, were read, and Dr. A. P. Buchman, on motion, was appointed to answer the communications.

The following resolution was offered: "Resolved, that Section 3, of Chapter 2, of the by-laws be amended by striking out the words, 'Agreements and schedules of fees shall not be made by the society.'"

Communication from Dr. F. C. Heath, secretary of the state society, concerning papers referred to the state society for program for 1909 was read and placed on file.

Adjourned.

J. C. WALLACE, Secretary.

(Meeting of Dec. 1, 1908.)

Society met in regular session in the assembly room, with fifty-one members present. Minutes of the previous meeting read, and after correction in the discussion were approved.

Chronic Constipation was the title of a paper by Dr. W. W. Carey, in which he said that constipation

is often caused by faulty diet and habits. Treatment resolves itself into correct diet, habits, massage, hydrotherapy, physical exercise, and medicine, and the author thinks a combination of the first four is the most successful. Experience has taught that certain foods, like certain drugs, stimulate and inhibit the intestinal act. Nourishing foods can be combined with the coarser foods, thus gaining the nourishment, and having enough residue left to promote peristalsis. As to habit, regularity should be observed as to time of stool, as this is the chief point to impress on patients. This training should commence in early childhood. Cases that will not react to diet and drugs will respond to massage and vibration within a short time, and with lasting results. As to hydrotherapy he recommended the effective wet rub, hot and cold douches to abdomen, and the wet binder. As a summary the author said that the problem is to procure adequate and regular evacuation of the bowel. The way in which the methods are carried out is what counts for the result rather than the particular method itself.

Opening the discussion, Dr. B. Van Sweringen said that the etiology will give a clue to the treatment. Constipation is a symptom only.

Dr. Nierman said that where violent massage is used there is danger of displacement of the gut.

Dr. Drayer spoke of flushing the bowel through a catheter fastened in the stump of the appendix, and said that this method of treatment for chronic constipation is a failure. Side-tracking the gut is bad for the patient. Surgical treatment for chronic constipation is a farce and a delusion.

Dr. Rosenthal defended surgical procedures where there is constipation due to bands, etc., obstructing the passage of the feces.

Dr. McOscar said stimulate or produce normal peristalsis and this will cure chronic constipation.

Etiology and Pathology of Hemorrhoids was the title of a paper by Dr. C. C. Kimmel. He said the predisposing causes are age, heredity, sex, habits, occupations, environments, clothing, and anatomical conditions. The exciting causes are constipation, drugs, diet, injuries or external causes, spasm and atony of sphincter muscles, and diseases, remote and immediate. The pathologic stages in hemorrhoidal production are as follows: venous distention, exudation, hyperplasia of connective tissue; (a) in the wall of the vein, (b) outside the veins; the tumor mass, (a) macroscopic and (b) histologic; of the structures involved, (a) mucosa, (b) submucosa, and (c) veins.

Fistula in Ano was the title of a paper by Dr. W. F. Schrader, in which he said that fistulae are the sequelae of inflammation of the rectum and the tissues surrounding it. As to the tissues involved he classifies them as sub- tegumentary, sub-mucocutaneous and sub-mucous. As to etiology they are tuberculous, syphilitic, etc., and are also named dumb-bell, horseshoe, spiral, etc., from fancied resemblance to these objects. Abscesses in the region of the rectum may result from injuries, exposure, disease, threadworms, etc. These cavities gradually develop a sinus or sinuses because feces are constantly getting into them, and thus prevent healing as do the spasmodic sphincteric contractions resultant of the irritation. Necrosis of the sacrum and coccyx are also productive of fistulae. As a rule complete fistulae are more easily diagnosed. Almost always an indurated tract from the external opening can be followed by digital ex-

amination to the internal opening in the rectum. The author described the external opening as an ulceration or fissure, sometimes elevated and sometimes hidden in radial folds of the anus, and more often found in a cleft of vegetation. The internal opening may be found by following the indurated tract.

As to treatment, the author said that dilatation was hardly an operative procedure, yet it is more than palliative. Keeping the sinus well drained and granulations stimulated sometimes succeeds in closing a plain fistula. Injection of astringent substances and ligation or setonizing are of use only when the patient will not submit to the knife. Division, excision, fistulotomy and the use of the cautery are the best methods. He spoke on the use of vaseline and bismuth paste, especially in tubercular fistulous tracts.

Dr. Buchman said that hemorrhoids are nothing more than varicose veins, and the treatment should be about the same as is accorded varicose veins anywhere else; and the same results follow.

Dr. Porter referred to arterial hemorrhoids and said that he had come to ask all patients with a lesion of the liver whether or not they were sufferers from hemorrhoids. He said it was his opinion that a lesion of the liver this side of obstruction to the portal circulation quite frequently gives rise to hemorrhoids. He condemns the injection method of treatment of piles.

Dr. Rosenthal spoke on the Pennington pile plug, and said that it more frequently produced hemorrhage than it stopped same. He also spoke on the advantage of methylene blue stain for following up fistulous tracts.

Dr. Porter said that he had discarded plugs in the rectum after pile operations, as he found that patients do not need opiates after such operations as they formerly did when the plug was used. He said that the pain after pile operations, in his judgment, was due to the plug in the rectum. He said he had come to regard the clamp and cautery as best operation for piles.

Dr. Weaver said that Ochsner used vaseline only on the parts after a pile operation.

The discussion was closed by Dr. Schrader.

The annual election of officers resulted as follows: President, Dr. H. O. Bruggeman; vice-president, Dr. Carl Schilling; secretary, Dr. J. C. Wallace; treasurer, Dr. W. P. Whery; censor, Dr. S. H. Havice.

Adjourned. J. C. WALLACE, Secretary.

CLAY COUNTY.

The regular meeting of the Clay County Medical Society was held December 17 at Brazil. Communications were read by the secretary from the Fort Wayne Medical Society, from the Chicago Pasteur Institute, and from Dr. Pierce in the Union Hospital. These were ordered placed on file and the secretary instructed to answer for the society.

Papers were presented by Dr. F. C. Dilley and Dr. J. L. Lambert. Dr. Dilley spoke on "The Dangers of Tuberculosis Infection," and made a practical plea from the viewpoint of the sanitary health officer. By the request of the society he will, at a future meeting, continue the subject, demonstrating the different tuberculin tests, etc. Dr. Lambert presented the subject of "Diabetes." He has treated a number of typical cases, all adults above middle age, and gave a grave prognosis.

In the discussion Dr. Weaver, of Staunton, said that he had had gratifying results from the use of pancreatic enzymes with the chlorid of gold and arsenic, continued for months.

At the next meeting the following papers will be presented: "Report of Four Cases of Ectopic Gestation," "Syphilis," and "Scarlatina."

The election of officers for 1909 resulted as follows: President, S. G. Hollingsworth, Brazil; vice-president, T. M. Weaver, Staunton; secretary-treasurer, G. W. Finley, Brazil; censors, T. Roy Cook, Bowling Green; G. M. Pell, Carbon, and H. J. Pierce, Clooland.

After a general discussion of local fee bills, telephone consultation, night calls, etc., the society adjourned to meet on Jan. 21, 1909.

Adjourned.

G. W. FINLEY, Secretary.

CARROLL COUNTY.

The Carroll County Medical Society met at Delphi Dec. 18, 1908. Dr. A. McCleary discussed "The Eye."

The election of officers resulted as follows: President, D. A. McCleary; vice-president, C. C. Crampton; secretary, W. R. Quick; treasurer, P. W. Conway. Dr. Eva Nebeker Kennedy made application for membership to the society by handing in her letter from the Fountain County Medical Society. The next meeting will be held in Delphi the second Friday in March, followed by a banquet.

Adjourned.

W. R. QUICK, Secretary.

DELAWARE COUNTY.

The Delaware County Medical Society met in regular session December 4. Meeting called to order by the president, Dr. U. G. Poland. Minutes of previous meeting read and approved.

The committee on legislation presented the following report with reference to the formation of a National Department of Public Health in the existing Department of the Interior:

"We beg to report that your committee have carefully considered the communication of Dr. J. N. McCormack, and would recommend that the chairman of the committee be instructed to communicate with the Indiana Senators and Representatives in Congress, conveying to each of them in personal letters the unanimous prayers of this association, that at the coming session of Congress he will give his best efforts, by voice and vote, to the pending measures recommended by the President, providing for a National Department of Public Health as a co-ordinant part of the Department of the Interior, and that necessary expenses of stenographer, etc., be paid by the society." This report was adopted.

The committee on legislation also presented the draft of a proposed city ordinance in reference to licensing and regulating transient and itinerant vendors who offer their goods for sale upon the streets. Said draft was read by the secretary, and on motion duly carried, was referred to a committee of two, with power to modify and take final action on same.

Motion was made and carried that the date of the January meeting be changed from January 1 to January 8, and that the meeting be in the nature of a social session, and that the president appoint a committee to take charge of the matter.

Dr. G. R. Green stated that to a family in which he was treating a case of typhoid fever a bottle of

milk had been delivered, which, upon carefully pouring off the supernatant milk, he found to contain about a tablespoon of dirt and débris. The milk was stated to have come from a dairy which is given credit of being one of, if not the most, sanitary dairies in Delaware County. Dr. Green stated that he had sent a sample of this milk to the State Laboratory for analysis, and desired to know how long it had been since a sample of milk from any of the dairies delivering milk in Muncie had been analyzed. In his opinion some action should be taken at once to remedy such a state of affairs.

The election of officers resulted as follows: President, Dr. W. A. Spurgeon; vice-president, Dr. Chas. Frazer; secretary-treasurer, Dr. H. S. Bowles; delegate, Dr. I. N. Trent; censor, Dr. P. C. Barnard.

Adjourned.

H. S. BOWLES, Secretary.

DEARBORN COUNTY.

The Deaborn County Medical Society held its regular monthly session at Aurora, Tuesday, December 29. The election of officers for 1909 resulted as follows: President, Dr. J. C. Elliott; vice-president, Dr. E. J. Libbert; secretary-treasurer, O. S. Jaquith; censors, Drs. Emmert, Ford and Jaquith; delegate, Dr. F. M. Mueller.

After a general discussion the society decided to take up the postgraduate course, and the matter was left in the hands of Drs. Sutton, Libbert and Jaquith to report on at the next meeting.

Adjourned.

O. S. JAQUITH, Secretary.

DEKALB COUNTY.

The DeKalb County Medical Society met in regular session December 3, and the following officers were elected to serve for the ensuing year: President, W. W. Swarts, Auburn; vice-presidents, E. K. Shurtz, Waterloo, and O. F. Rudolph, Corunna; secretary-treasurer, C. S. Stewart, Auburn.

Adjourned.

CHARLES S. STEWART, Secretary.

ELKHART COUNTY.

The Elkhart County Medical Society held a public meeting on tuberculosis December 2 in place of its regular meeting, in the Presbyterian Church, Elkhart. A special effort was made to have all those attend who have a tubercular history, those who have friends who have a tubercular history or who need special instruction along this line. All the physicians in the county made an effort to reach their patrons thus inclined.

Dr. J. B. Porter discussed the "Prevention of Tuberculosis." He stated that 150,000 die annually from tuberculosis and that 1,250,000 are incapacitated each year. During the year there were 68 deaths in Elkhart from tuberculosis, and 19 from typhoid, scarlet fever, diphtheria, smallpox, measles, etc. The specific character of the disease was described and its means of communication by dried sputum, and the milk from tubercular cows. Anti-tubercular societies should be formed with visiting nurses to give instructions in the home regarding ventilation, sunshine, prevention of the infection of other members of the family, necessity of nourishing food, etc. We should have laboratories for the prompt examination of sputum. There should be more stringent anti-spitting

laws; there should be state laws providing for the inspection of dairies, also railroad and street car shops should be supplied with cuspidors. Much stress should be put upon lectures to school teachers. Tuberculosis can not be eradicated in this decade but may be sooner or later.

The Treatment of Tuberculosis was discussed by Dr. D. L. Miller. In the discussion he said that the tubercle bacillus is always with us. To avoid the disease is to prevent a soil upon which the bacillus can be propagated. More time should be spent in building up personal resistance, which is Nature's best gift. Fresh air and sunshine are indispensable. Statistics show that more people die from all diseases where residence is on the shady side of a mountain range than where living on the sunny side. Tuberculosis sanatoria are useful but it is not always necessary for all patients to go to these institutions to get well. Fresh air and sunshine are free at home. But more than outdoor living is necessary. The diet is the chief factor in many cases, and is essential in all cases. No strict rule as to diet can be laid down. Over-feeding is unwise. The digestive organs should not be overtaxed. Patients should have plenty of nourishing food adapted to their wants. Rest is also an important consideration; both mental and physical. The affected lung should be kept immovable if there is much rise of temperature.

Duties to the Public from a Sanitary Standpoint was discussed by Dr. A. A. Norris. The physician's duty to the public is to shape its education regarding sanitary matters. Greater and more efficient power should be delegated to sanitary authorities. We should teach the public that tuberculosis can be prevented, and show the public the inadequacy of our present system of health regulations. The public should also be instructed that the condition of the tuberculous patient is of more importance than the bacilli. The Federal government is taking means to preserve the public health, but its steps are not concentrated. It is directed by different cabinet officers who do not co-operate with each other. There are three great agencies for the education of the public, viz., public school, forum and press.

What Can the Teacher Do to Prevent the Spread of Tuberculosis? This subject was discussed by E. H. Drake, superintendent of the Elkhart city schools. Professor Drake said that the public schools are an important medium for the instruction of the people, because whatever the children are taught becomes a matter of interest to the parents. A teacher can instruct the pupils regarding tuberculosis, as to nature, cause, and how contracted. The state of Indiana has recently adopted a text-book of physiology and hygiene for the schools with up-to-date teaching upon these very important subjects. Of much importance also is instruction regarding breathing and the ventilation and proper sweeping of the school room, together with the dangerous use of a common drinking cup.

The Tragedy of Uncleanliness was discussed by Cyrus D. Roys. Filth, vice and disease usually dwell together. Americans are not a cleanly people when compared with other nationalities. Our habits of personal cleanliness are far inferior to those of the Oriental. The wonderfully small mortality in the Japanese army in recent wars was largely due to the fact that before the battle each soldier was compelled to take a bath and change his underclothing. Under

these circumstances bullet wounds rarely become infected. Politicians should keep their hands off matters relating to public sanitation. Laws governing general health should be formulated exclusively by physicians.

The Duties of the Minister to the Public in the Prevention of Tuberculosis. This phase of the subject was discussed by Rev. Lewis H. Hall. He said that pastors are interested in questions of public health and are working for the uplifting of the human race. There has been a great change in the ministry during the past five years. The old theory of man's inhumanity to man is getting a severe test these days. The church is doomed to failure unless it identifies itself with the present onward movement for the stamping out of infectious diseases. There were no hospitals, no insane asylums, and no orphanages before the advent of the Great Teacher. The best way to help a man is to teach him to help himself.

The General Duty of the Public was discussed by Editor A. P. Kent, and he spoke of what the public owes, what the public demands, and what the public ought to do for the protection of the individual. The public should acquire all possible information. Anti-spitting laws are useless unless backed up by public opinion. Power lies in organization, concentration of energy and massing of knowledge.

Dr. C. W. Frink closed with the theme, "When to Get Busy." The universal answer to this is now! We must do work immediately, not only for our own generation but for future generations. Medical inspection of schools shows that a perfectly healthy child is very rare and that a large number of children present stigmata of tuberculosis. We should get busy and carry out the suggestions given in these discussions, on medical inspection of schools, and see to the proper ventilation of schoolrooms, churches, factories and all public places. All classes need more sunshine.

Adjourned. GEORGE W. SPOHN, Secretary.

FAYETTE COUNTY.

The regular meeting of the Fayette County Medical Society was held Dec. 1, 1908. At this session the following officers were elected for the ensuing year: President, Dr. J. H. Clark; vice-president, Dr. R. H. Elliott; secretary-treasurer, Dr. H. M. Lamberson; censor, Dr. L. D. Dillman; delegate, Dr. J. R. Mountain.

The society is doing the postgraduate work as recommended by Dr. McCormack.

Adjourned. H. M. LAMBERSON, Secretary.

FLOYD COUNTY.

The Floyd County Medical Society met in regular session at New Albany December 4, with a good attendance. Dr. Albert E. Kimburger was unanimously elected to membership in the society.

The Importance of Medical Therapeutics was the title of a paper by Dr. George E. Dash, which was freely discussed.

The election of officers for the year 1909 resulted as follows: President, Dr. Anna McKamy; vice-president, Dr. J. E. Bird; secretary-treasurer, Dr. R. K. Brown; censors, Drs. E. P. Easley, F. H. Wileox and J. F. Weathers; delegate, Dr. C. P. Cook; alternate delegate, Dr. J. F. Weathers.

Adjourned. J. E. BIRD, Secretary.

FOUNTAIN-WARREN COUNTY.

The fourth quarterly meeting for 1908 of the Fountain-Warren Medical Society was held in Attica December 3, 1908. Dr. R. O. McAlexander, of Indianapolis, delivered a lecture on the "Affections of the Fallopian Tubes."

Reports were made on the progress of the work of the Attica and Covington local societies relative to the postgraduate work, the Attica society having just completed its first year's work.

The election of officers resulted as follows: President, T. B. Campbell, West Lebanon; vice-president, L. A. Bolling, Attica; secretary-treasurer, C. G. Beckett, Attica.

Adjourned.

C. G. BECKETT, Secretary.

HOWARD COUNTY.

The Howard County Medical Society held its regular meeting and annual election of officers in the Carnegie Library, Kokomo, Friday, December 4. Preceding the election the session was one of clinical reports and general discussion. An official communication from Dr. McCormack, regarding the movement for a National Department of Public Health, and urging activity of the society in bringing pressure to bear on congressmen, was read by the secretary and freely discussed.

The election of officers resulted as follows: President, J. O. Garr; vice-president and secretary-treasurer were re-elected; censors, N. C. Hamilton, J. W. Wright and C. J. Adams; delegate, J. M. Moulder; alternate, J. W. Wright.

Adjourned.

WILL J. MARTIN, Secretary.

JACKSON COUNTY.

The Jackson County Medical Society held a banquet in connection with their regular meeting on December 3. About twenty physicians were present. At the conclusion of the banquet a business meeting was held in the assembly room at the library. The annual election of officers resulted as follows: President, Dr. A. May, of Crothersville; vice-president, Dr. H. R. Lucky, of Seymour; secretary-treasurer, Dr. G. H. Kamman, of Seymour.

Adjourned.

G. H. KAMMAN, Secretary.

JEFFERSON COUNTY.

The Jefferson County Medical Society met in regular session in the rooms of the Commercial Club at Madison, December 23.

The following officers were elected for the year 1909: President, Vincent Shepherd; vice-president, H. S. Hatch; secretary-treasurer, Carl Henning; censor, E. C. Cook.

Adjourned.

CARL HENNING, Secretary.

JENNINGS COUNTY.

The regular monthly meeting of the Jennings County Medical Society was held in North Vernon, December 9. A quiz was held on the subjects of "Jaundice," "Diagnosis and Treatment of Cirrhosis of Liver," and "Medical Treatment of Gall Stones."

The election of officers for the coming year resulted as follows: President, W. L. Grossman; vice-presi-

dent, F. M. Daubenheyer; secretary-treasurer, W. H. Stemm; censors, Drs. Saunders, Robertson and Richardson; delegate to state association, W. H. Richardson; delegate to Fourth Councilor District Medical Society, Dr. R. Saunders.

Adjourned.

W. H. STEMM, Secretary.

KNOX COUNTY.

The annual business meeting and banquet of the Knox County Medical Society was held December 11 at the Boog Hotel in Vincennes, with about thirty-five members present. At this time seven new members were taken into the society. At the conclusion of the banquet election of officers was held, resulting as follows: President, Dr. Joseph W. Smadel; vice-president, Dr. Clark E. Stewart; secretary-treasurer, Dr. Charles S. Bryan; censors, Drs. W. H. Davenport, L. B. Staley and J. P. Ramsey; delegate, Dr. L. B. Staley; alternate, Dr. J. B. Kessinger.

Adjourned.

CHARLES S. BRYAN, Secretary.

KOSCIUSKO COUNTY.

The Kosciusko County Medical Society met in regular session December 15. The following papers were read: "The Evils of a Division of Fees in Surgical Cases," by Dr. J. M. Bash, Warsaw, and "Medical Bookkeeping, Card Index System, and Collections," by Dr. N. A. Cary, Silver Lake. Dr. C. N. Howard read a paper on "Our System of Medical Organization; What It Means; What It Stands For, and Value of Membership." The meeting was devoted to the business side of the physician's life. There was a free discussion in which many additional good points were brought out. Those taking part in the discussion were Drs. Leiter, Fermier, Young, DuBois, Hines, Long, Howard, Foster, Thomas, Ford and Anglin.

Letters of acknowledgement were read from Senators Hemenway and Beveridge and Representative Barnhart, in response to the resolutions in regard to a national health department, which were passed at the last meeting.

The election of officers resulted as follows: President, Dr. C. W. Burkett, Warsaw; vice-president, Dr. T. J. Shackelford, Warsaw; secretary-treasurer, Dr. C. N. Howard, Warsaw; delegate, Dr. P. G. Fermier, Leesburg; censors, Drs. C. C. DuBois, Warsaw; C. E. Leedy, Pierceton, and C. E. Thomas, Leesburg.

Adjourned

C. NORMAN HOWARD, Secretary.

LAKE COUNTY.

The regular monthly meeting of the Lake County Medical Society was held in Hammond, Dec. 3, 1908, with twenty-five members present. The annual election of officers resulted as follows: President, Dr. A. G. Schleiker, East Chicago; vice-president, Dr. W. P. Alexander, Gary; secretary-treasurer, Dr. E. M. Shanklin, Hammond; censor, Dr. Eleanor Scull, Hammond; delegate, Dr. W. F. Howat, Hammond, alternate, Dr. W. P. Alexander.

Exophthalmic Goiter.—Clinical case report by Dr. H. C. Groman. This patient made rapid improvement

under treatment consisting in the use of hyoscin and the brouids internally, and the external use of atropin ointment; the latter being used until systemic effects were seen.

Dr. Schleiker reported good results from the use of the Tr. belladonna, in doses of 5 m. every two hours until effect.

The retiring president, Dr. Howat, read the annual president's address, first discussing the society and its progress, and concluding by reading a paper on congenital syphilis. The paper was an exhaustive study on the subject and was freely discussed.

Adjourned.

E. M. SHANKLIN, Secretary.

LAPORTE COUNTY.

The LaPorte County Medical Society met in regular session at Michigan City December 11.

Smallpox was the title of a paper by Dr. Bacon, which was full of practical points, and was well discussed.

The Doctor Then and Now was the title of a paper by Dr. Tillotson, and this was followed by Dr. Hollenbeck, who read a paper on "The Doctor as a Business Man."

The election of officers for 1909 resulted as follows: President, J. W. Milligan; vice-president, J. N. Kelley; secretary, B. O. C. Bowell; treasurer, E. G. Blinks; censor, B. W. Hollenbeck; delegate, H. H. Martin.

Adjourned.

J. W. MILLIGAN, Secretary.

MADISON COUNTY.

The Madison County Medical Society met in regular session December 23, with Dr. Lot E. Alexander in the chair. The annual election of officers resulted as follows: President, Dr. Lucien O. Williams; vice-president, C. P. Runyon; secretary-treasurer, Ben. H. Cook; delegate, Lot E. Alexander; alternate, Doris Meister; censor, Etta Charles. Dr. Lot E. Alexander, the retiring president, delivered an address on "The Beauties of Shakespeare."

The next meeting of the society will be held at Elwood, and the subject for discussion will be "The Treatment of Scarlet Fever by the Serum Method."

Adjourned.

BEN H. COOK, Secretary.

MARION COUNTY.

INDIANAPOLIS MEDICAL SOCIETY.

(Meeting of Aug. 11, 1908.)

Society called to order on the lawn of the Eleanor Hospital by the president, Dr. Wynn. The purpose of the meeting, as explained by the president, was to hear the report of the committee on the question of the establishment of a Milk Commission by the society. The committee recommended "That the Indianapolis Medical Society establish a Medical Milk Commission to consist of five physicians; that the members of such commission serve without compensation; that they make such rules and regulations concerning certification as in their discretion they may deem necessary and proper; that they submit nomina-

tions to the President to fill any vacancies occurring in their membership and that they make such arrangements to secure such competent veterinary, chemical and bacteriologic service as may be available; that they submit annually to the society a detailed report of their receipts, expenditures and operations." The report was adopted.

Dr. Torian moved that the society appropriate \$100 to meet the initial expense of the commission, this sum to be returned as soon as possible after the work of the commission is instituted. This motion was carried. Light refreshments were served by the nurses of the hospital.

Adjourned.

R. H. RITTER, Secretary.

(Meeting of Oct. 6, 1908.)

This being the first meeting after the summer intermission, no formal scientific program was arranged, but the meeting was rather an informal smoker and social occasion. The meeting was called to order by President Dr. Wynn, in the dining room of the Commercial Club. After a brief matter of business the president introduced Dr. Edwin Walker, of Evansville, who gave a brief address on "A Review of Recent Medical Educational Developments and Possibilities in Indiana."

Dr. J. Ewing Mears, of Philadelphia, son of Dr. G. W. Mears, of Indianapolis, was present and was invited by the president to speak. His talk was very interesting, and among other things he said that he saw the first operation under ether anesthesia west of the Alleghany Mountains in a hospital at Cincinnati. He was the first in Philadelphia to apply the method of Lister.

Dr. J. N. Hurty gave a brief review of the work and his personal impression of the important figures in the recent International Congress for the Study of Tuberculosis.

Dr. F. C. Heath responded in his usual happy way to the eulogy of the president, and, his political reservoir being empty, he delivered a sermonette from the text "A Merry Heart Doeth Good Like a Medicine."

Dr. Theodore Potter, referring to the plan of the American Medical Association in instituting courses of lectures on practical subjects for the general public, moved that a standing committee be appointed for that purpose by the president. Motion carried.

Adjourned.

R. H. RITTER, Secretary.

(Meeting of Oct. 13, 1908.)

Society called to order by the president, Dr. Wynn. Dr. J. Ewing Mears, of Philadelphia, delivered the address of the evening on the subject, "Modern Surgery and Medicine in the Orient." The address was really a review of his personal investigations and observations during an extensive journey through the far East.

Adjourned.

R. H. RITTER, Secretary.

MIAMI COUNTY.

The Miami County Medical Society met in regular session in the Commercial Club room, Peru, November 27. Meeting was called to order by President Dr. Griswold.

Dr. John Spooner moved that the December meeting be postponed until December 29, Tuesday, and that it be made a social session for the members' families, and that supper be served at some place to be determined later by committee. Motion carried.

Dr. Lou Miller, of Toledo, a visitor, was called upon for a few remarks.

Adjourned.

D. C. RIDENOUR, Secretary.

PIKE COUNTY.

The Pike County Medical Society met in regular session with a very large attendance. Dr. J. W. Coleman read an interesting paper on "Enterocolitis and Its Sequelæ."

The annual election of officers resulted as follows: President, I. G. McGlasson; vice-president, I. R. Rice; secretary-treasurer, E. S. Imel; censors, Drs. Kime, Coleman and Bosings.

Adjourned.

E. S. IMEL, Secretary.

PUTNAM COUNTY.

The Putnam County Medical Society held its regular meeting Dec. 22, 1908. The unfinished business of 1908 was closed up; methods for making 1909 a banner year for the society were enthusiastically discussed, and inaugurated.

The election of officers for 1909 resulted as follows: President, Charles Sudranski; vice-president, J. E. Cullipher; secretary, J. V. Bastin; treasurer, Jas. L. Preston.

Bimonthly meetings will be held during the year on the second Tuesday of February, April, June, August, October and December. The Postgraduate Club of the society will continue its work on each alternate Thursday night.

SPENCER COUNTY.

The Spencer County Medical Society met in regular session Nov. 17, 1908, at Rockport. Minutes of previous meeting read and approved.

The Tonsil and Its Treatment. Dr. H. C. Knapp, of Huntington, read this paper. The faucial tonsil is, in reality, a large lymphatic gland. From its intimate vascular and lymphatic connection with tissue and its exposed position it is an important structure from a pathological standpoint, as it is the site not only of local pathological alterations which may be local manifestations of a constitutional condition, but the tonsillar structure, when subjected to superficial ulcerations, may form a channel for systemic infection. Many systemic diseases have been traced directly to pathologic tonsils. It has of late been emphasized by different observers and it has been proven that the route of entry for tuberculosis and other infectious diseases is through the crypts of both faucial and pharyngeal tonsils.

Nearly all operators are now agreed that in the surgical treatment of diseased or hypertrophied tonsils the proper procedure is to enucleate the gland and not merely to clip off a portion of it. The importance of the tonsil operation should not be underestimated, as has so often been the case, for it can justly be

classed among the major operations in surgery. It is an unfortunate fact that the importance of operating on the tonsil has been greatly underestimated by both the physician and the laity. This, of course, is largely due to the ease with which the protruding portion of the tonsil can be clipped off with a tonsillotome. Such operations have no relationship to a complete removal of the tonsil, which latter day teachers have clearly proven is the proper thing.

In operating, first secure perfect anesthesia; second, good illumination. Inject about two drachms of the anesthetic (weak cocaine and adrenalin). The tonsil is then grasped with an angular tonsil forcep, and drawn out. Then with tonsil knife cut into the mucous membrane and not into the pillars, but just where the membrane joins the tonsil. The work can be done very deliberately, very carefully and very accurately, and still with great rapidity if the surgeon knows what he has to do and is always ready for his work no matter what emergencies arise.

Not enough attention has been paid to tonsils, especially in young children. It has become recognized that non-protruding tonsils, even in young children, may be the cause of much trouble. Submerged tonsils have a considerable size which becomes manifest when the patient is made to gag, at which time they bulge out so as nearly to touch. Even though the fauces may seem sufficiently roomy when the throat is in repose; yet in children the tonsils are relatively large as compared with the small faucial space. Such submerged tonsils may be more or less of an obstruction to nasal respiration and are thus causative factors in middle ear disturbance.

Religion and Medicine, a paper read by Rev. S. J. Cross, of Chrisney, in which he said that there is no reason why religion and medicine may not go hand in hand in their efforts to uplift humanity. There is every reason why a physician should be a religious man. No person, not even the most revered pastor, has access to the home-life and heart-life of the people as does the family physician. The closet which is kept closed and barred against all others, even the minister, is thrown open wide and its grinning skeleton revealed to the man of medicine. I wonder that at times the trusted physician does not sink under the burden of family secrets he is compelled to carry about, and of which, for honor's sake, he is not privileged to relieve himself by sharing it with another. And because he thus has access to the heart-life of his patients, no man is so potent a factor for good—or evil—in the lives of those to whom he ministers, as the physician. And, be it said to the credit of the profession, instances are rare where the physician has taken advantage of these opportunities to bring greater pain or sorrow into the lives of his patients, or to lay up future remorse and shame for himself. On the other hand, the question might arise as to whether he has accomplished all he might when he has ministered to the body. Does he not, as a healer, have a duty to the soul of his patient? How often a disease is as much a mental or spiritual affliction as a physical one.

The time will come when the work of the physician will be to treat the mind and the soul, thus hastening the healing of the body. May not the work of the physician of the future be to keep people well instead

of making them well after sickness and disease comes on; and still beyond this may there not come a time when each will be his own physician?

The coming mother will teach her child to assuage the fever of anger, hatred and malice with the great panacea of the world—love. The coming physician will teach the people to cultivate cheerfulness, good will and noble deeds for a health tonic as well as a heart tonic, and that "a merry heart doeth good like a medicine."

Let us then, as professional men, both physicians and ministers, seek more and more to teach those to whom we minister that

"Good may ever conquer ill,
Health walk where pain has trod;
'As a man thinketh, so is he,'
Rise, then, and think with God."

Adjourned.

H. Q. WHITE, Secretary.

* * *

The Spencer County Medical Society met in regular session December 15. Minutes of previous meeting read and approved. The election of officers resulted as follows: President, Dr. S. P. Gwaltney; vice-president, Dr. C. S. Baker; secretary-treasurer, Dr. H. Q. White; censor, Dr. C. B. Adye.

"The Social Diseases" was the subject for discussion, and papers on the various phases of this subject were read by Drs. Gwaltney, H. Q. White, DeTar, Baker, Stuterville, and Dr. Jolly. The reading of each paper was followed by a general discussion.

The next meeting will be held January 16 at Rockport, and the subject to be presented will be "Diphtheria."

Adjourned.

H. Q. WHITE, Secretary.

ST. JOSEPH COUNTY.

The St. Joseph County Medical Society held its twenty-third annual meeting November 24, in the banquet hall, Hotel Oliver, South Bend, with one hundred and twenty-five physicians present. Society called to order by President C. E. Hansel.

Obstetrical Hemorrhages was the title of the first paper on the program, by Dr. W. L. Owen, of South Bend. He said that loss of blood in the early months of pregnancy should always be regarded with suspicion, for, though it should not presage an abortion, it usually indicates the existence of a hyperplastic endometritis or an abnormal implantation of the placenta. Premature detachment of the placenta is fortunately rare, and its treatment is one of action, not expectant. The uterus must be emptied at all hazards, and Cesarean section comes into consideration. Placenta pravias is probably the most dreaded complication of pregnancy and is comparatively rare. Zweifel's conclusions represent the latest and most approved ideas in treatment. Briefly, they are: Vaginal tamponade till labor comes on; strict asepsis; rupture of the membranes if possible; Braxton-Hicks version as early as the condition of the cervix permits. As in many of these cases the child is premature, too great effort should not be made to save the child; abdominal and vaginal Cesarean section should not be resorted to. In the treatment of post partum hemorrhage the method of Stowe of bimanually compressing the uterus is of value. Many of the methods recommended in the texts are inefficient.

In the discussion Dr. J. A. Work, Sr., of Elkhart, emphasized the importance of saving all the blood possible, and felt that an important feature in the treatment of hemorrhage is the elevation of the hips, in conjunction with manipulation of the uterus. His experience with drugs has not been satisfactory.

Tumors of the Female Breast was the title of a paper by Dr. Charles E. Kahlke, of Chicago. He first called attention to the fact that most cases of cancer die from the disease in spite of a thorough operation. This, he said, is due to the delay in operation. If the operation is performed before involvement of the axillary glands, the majority get well; after involvement of the axillary glands the great majority die. He next spoke of the diagnosis of the early cases, advising the prompt removal of every single tumor of the breast in old or young, benign or malignant, in the latter case making the radical operation immediately. In case of doubt as to the nature of the tumor it is always best to settle the question by an exploratory operation. The prognosis and treatment of the various tumors were outlined, and, in connection with the radical operation, some special points in the anatomy of the breast and lymphatics were mentioned.

The discussion was opened by Dr. J. B. Greene, of Mishawaka, who said that in his opinion these breast tumors should be treated kindly. Internal medication is useless and local treatment harmful. Protect the breast until operation, and then do a thorough operation.

Dr. J. C. Fleming, of Elkhart, said that he believed cancer of the breast a curable disease if diagnosed early and thoroughly removed.

The discussion was closed by Dr. Kahlke.

The Treatment of Hernia, Mechanical and Operative, was the title of a paper by Dr. John H. Oliver, of Indianapolis, in which he said that ten per cent. of the human race have hernia. Regarding the use of a truss, he said that the truss should be fitted accurately by the physician. He is not in favor of trusting femoral hernia to the uncertainties of truss control. The ill effects of long continued truss pressure were shown. Strangulated hernia is a matter of importance to every general practitioner, and he should be prepared to take care of these cases. Taxis should not be continued for more than ten minutes. The various operations for the relief of hernia were described. The return of large hernial masses to the abdominal cavity is always attended with considerable risk, and should be preceded, when possible, by rest in bed, limited diet and free purgation. Undescended testicle is a very undesirable complication; the ectopic testicle should be removed if the other testicle is normal.

In opening the discussion, Dr. Stoltz, of South Bend, said that patients operated on for hernia should not be allowed to leave bed too soon. The object of these operations is to cure the hernia and prevent recurrence.

Dr. Greene, of Mishawaka, condemned injudicious manipulation of strangulated hernia, and this point was also emphasized by Dr. C. W. Frink, of Elkhart.

In closing the discussion, Dr. Oliver stated that he felt that strangulated hernia should be treated intelligently and that taxis was of service occasionally but generally operation was advisable.

A Few Practical Phases of the Cancer Problem, with Illustrative Cases was the title of a paper by Dr. William Seaman Bainbridge, of New York City. A

number of wax casts, photographs and drawings were shown. He confined his attention to the following: (1) The infectivity or contagiousness, or, better, the transmissibility of cancer, which is of growing interest to the public. (2) Diagnosis, which concerns every practitioner of medicine, no matter what may be his specialty. (3) "How does cancer extend in the individual?" which concerns the surgeon because of its influence upon technic.

Transmissibility.—While anatomically, histologically and histogenetically all the study and investigation which has been devoted to the cancer problem have taught many things, just what primarily initiates the pathological process which we know as cancer is still an unsolved mystery. Many theories have been advanced from time to time, some of which seem to possess more or less reasonable foundation in fact, yet not one has stood the scientific test of hypothesis, experimentation and verification. The various theories concerning the parasitic or bacterial origin of cancer and the consequent infectivity of the disease from man to man is unqualifiedly an unverified hypothesis, and until such time as more light is thrown upon the subject the public should not be alarmed by the horrible thought that "cancer is contagious." What the future may establish we can not say, but in the light of our present knowledge there is no reason, moral or sanitary, for adding to the great burden of the individual afflicted with cancer by isolating him or her, as has been advocated by some, or for otherwise unnecessarily alarming the patient, relatives and friends. Every reasonable precaution known to modern surgery should be taken—broken down and degenerating tissues, which harbor pus-producing organisms, should be properly dealt with, and instruments, dressings and hands which come in contact therewith should be subject to the rigid requirements of asepsis. Surgeons and attendants dealing with patients who are the victims of advanced cancer are in far greater danger from infection with pus-producing germs than from possible infection with hypothetical parasites or cancer cells. While the evidence is insufficient to prove that cancer is communicable from one person to another, there is abundant proof that once an individual has become the subject of cancer there is not only the liability of the well-defined spreading of the local process, but there is danger of the contamination of tissue apparently free from the disease, as through faulty surgical technic, and through what may be called contact transplantation, as in cancer of the walls of the vagina from ulcerating cancer of the cervix in contact therewith.

Diagnosis.—The key-note of the whole situation is in the recognition of the precancerous stage. Early diagnosis is the first requisite to absolute and permanent eradication of the malignant process. By underestimating the importance of a fatal condition, or by rendering a mistaken diagnosis, the physician may cause a direful loss of time, or may be the means of depriving the patient of his only hope of permanent benefit—surgical removal of the new growth. In the light of our present knowledge, the sweeping statement may be made that every lump or bump should be removed by surgical procedure. If accessible, the growth, with a safe margin of healthy tissue, should be removed, and the diagnosis confirmed by subsequent microscopic examination. If, for any reason, it seems wise to incise a tumor which has not broken down, this should be done with the utmost care in order to

prevent the dissemination of the disease to healthy tissue. The strictest asepsis is necessary under such circumstances. If Nature's barriers have already been broken down by ulceration, a section for microscopic study may in some cases be removed from the surface without doing harm.

How does cancer extend in the same individual? This is a question of the utmost importance to the surgeon because of its direct bearing upon surgical technic. The following methods of extension were briefly discussed:

1. Direct extension—the destruction of all the tissues in continuity with the malignant growth.
2. Auto-transplantation, or artificial metastasis.
3. Embolic invasion through blood or lymph vessels.
4. Permeation.

The fourth method of extension is of particular importance with reference to surgical technic. According to this theory cancer spreads, not so much along the skin, as by continuity along the lymphatic plexuses of the deep fascia, with only here and there an "efflorescence" in the skin. Handley, who originated and elaborated the theory, considers it significant that Halstead, who almost invariably removes so much skin in breast operation that he must resort to skin-grafting in order to cover the denuded surface, but who does not extensively remove the deep fascia, has sixteen per cent. of skin recurrences, whereas Watson-Cheyne, who removes very little skin but makes very free ablation of the deep fascia, has only 6.5 per cent. of skin recurrences. Dr. Bainbridge had long followed the latter course with satisfactory results.

Dr. C. E. Kahlke said that he disagreed as to the infectivity of cancer. He also taught that it was good practice to remove a piece of the tumor before operation, that a positive diagnosis could be made.

Dr. Wynn, of Indianapolis, suggested that at one time actinomycosis and blastomycosis were considered as cancer, but that at the present time it was known that they are due to certain organisms; possibly in the future we may find other organisms the cause of some of these cancers. Dr. Wynn feels that much good would result from public education regarding cancer, much along the same lines as the work now being done by anti-tuberculosis societies.

An Analysis of Some Pulse Tracings was the title of a paper by Dr. Lawrence C. Grosch, of Toledo. Dr. Grosch illustrated his remarks with drawings and tracings.

At 6 o'clock the society adjourned to the dining room, where a banquet was tendered visiting members of the profession.

The Psychic Element in the Causation and Cure of Disease was the title of a paper read by Dr. Frank B. Wynn at the evening session. He said that the state of the mind has a wonderful influence on bodily functions. As an example, digestion may be good or bad, depending upon the mental state. Many ailments, psychoses, are due to continued suggestion. But suggestion is also a factor in organic diseases; much can be accomplished by order and good cheer in the sick room. In using suggestion therapeutically we must carefully distinguish functional from organic disorders. The neuroses of women are rarely associated with actual disease of the pelvic organs and "sexual weakness" in men is usually purely a neurosis. In the treatment of neurotic patients great care must be exercised that they be not unduly impressed with the severity of their ailments by frequent

physical or laboratory examinations. After a complete examination has been made and organic disease eliminated, stop all unnecessary procedures. Surgery in these neurotic cases only adds to the fire. All functional disturbances are curable; this must be impressed on these patients.

Dr. J. W. Milligan, of Michigan City, said that he feels that the physician's personality has much to do with his success or failure in treating these neurotic patients. In private practice the physician is often relieved to see them "go the rounds." But in institutional work the patient and the physician have no choice and are left to work out their own salvation as best they can. However, the institution physician can do much, for he has the constant supervision of his patients, and Dr. Milligan hopes to see much good from psychotherapy in institution work.

Dr. J. H. Oliver, of Indianapolis, said he felt that this question demanded the intelligent thought of the profession. Not all physicians are qualified to undertake this line of treatment. He believes that in the hands of competent physicians success will follow the use of this long neglected method of treatment.

Dr. Wynn closed the discussion by stating that he personally did not know how to settle the question of his relation to the various church organizations undertaking this line of work. He regards the matter as important; the public are much interested and the profession must determine its position with relation to the so-called Emmanuel movement, or similar organizations.

Drs. W. T. Belfield and J. B. DeLee, of Chicago, who were to have appeared on the program, were unavoidably detained and unable to be present.

Adjourned. CHARLES S. BOSENBURY, Secretary.

UNION COUNTY.

The Union County Medical Society met in regular session Dec. 3, 1908, at Liberty. The annual election of officers took place, resulting as follows: President, F. T. DuBois; vice-president, M. F. Veraker; secretary-treasurer, E. P. Weist; censors, Garrett Pigman, E. R. Beard and W. H. Hawley.

Dr. F. T. DuBois read a very interesting paper on the subject "The Treatment of Pott's Fracture."

Dr. Morris read a paper on "The Medical and Surgical Treatment of Injury of the Elbow Joint."

Both papers were generally discussed by all members present.

Adjourned. E. P. WEIST, Secretary.

VANDERBURGH COUNTY.

The Vanderburgh County Medical Society met November 24 at the Y. M. C. A. Hall, and a paper was read by Dr. C. G. Viehe on "Hypertrophied Prostate." He said that any enlargement of the prostate sufficient to form a barrier brings suffering, local and systemic disturbances. The beginning of the trouble which causes the patient to seek the physician is of many months' duration; many times the foundation is laid in youth—the boyhood masturbation, the subsequent immoderate sexual life and frequent engorgement of the prostate. The usual symptoms were given and the essayist passed on to the treatment. Twenty years ago palliation was the rule and the catheter life the method. To-day permanent cure is the relief. Not every man with enlarged prostate should be oper-

ated, but the one who suffers from persistent obstruction, retention and infection certainly should. As familiarity with the operation has increased the mortality has decreased. It is one of election, not of last resort when the patient's vitality has been dissipated and the bladder and kidneys infected. The author discussed the suprapubic and perineal operations, closing by giving a history of a case with perineal operation and recovery.

In opening the discussion Dr. Ehrich said it was a mistake to regard prostatectomy as a minor operation; it is a serious major operation. Drainage is the important point, and the best drain is a large tube with a small one attached along its entire length.

Dr. Walker reported a case operated by suprapubic route in which the prostate almost completely filled the bladder. On opening the bladder the upper surface of the gland was immediately below the mucous membrane. It was enucleated in one large mass. Free drainage by tube and urethra was instituted and the patient went on to complete recovery with excellent results.

Adjourned. W. R. DAVIDSON, Secretary.

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The meeting of December 8 was held at the Y. M. C. A. Hall, with sixteen members present. Dr. Ehrich read a paper on "Tuberculosis of the Kidney," which will soon appear in THE JOURNAL.

Adjourned. W. R. DAVIDSON, Secretary.

VIGO COUNTY.

The Vigo County Medical Society met in regular session, December 1, with twenty-six members present. Dr. Homer Wollery, of Indiana University, gave a talk on "Flexner's Antimeningitis Serum." He showed how its use so far had reduced the mortality of epidemic cerebro-spinal meningitis from 100 to 50 per cent, and it bids fair to do even better than that. The doctor demonstrated the technie of the intra-spinal injection.

Adjourned. CHARLES N. COMBS, Secretary.

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The society met in regular session, December 8, with thirty-five members present. Dr. Jutch lectured on "The Malarial Parasite." Dr. Stunkard lectured on "Clinical Forms of Malarial Fevers." The application of Dr. Otto Casey was read and referred to the board of censors. Dr. Schnell was appointed on the committee to investigate corporation practice.

The annual election of officers resulted as follows: President, J. H. Weinstein; vice-president, J. C. Bohn; secretary-treasurer, Charles N. Combs; delegate, R. H. Leavitt; alternate, F. H. Jett; censors, M. A. Boor, W. R. Mattox and E. S. Niblack.

Adjourned. CHARLES N. COMBS, Secretary.

WHITE COUNTY.

After a long silence the White County Medical Society has come to life and held a meeting December 3. The regular business being transacted, the election of officers for the ensuing year followed, resulting as follows: President, M. T. Didlake, Monticello; vice-president, A. C. Cray, Monticello; secretary, Grant Goodwin; treasurer, Guy R. Coffin; censors, Horace R. Minnick, Idaville; J. P. Galbreth, Burnettsville, and W. A. Spencer, Wolcott; delegate to state medical association, J. P. Galbreth. Dr. Charles H. McCully,

district councilor, was present, and his few remarks, which were plain and concise, had a very stimulating effect on those present.

Hitherto this society has had its meetings in Monticello, but now we propose that it will meet at different places over the county, hoping in this way to interest each and every eligible person on his own ground.

Adjourned.

GRANT GOODWIN, Secretary.

THIRD COUNCILOR DISTRICT MEDICAL SOCIETY.

The fall meeting of the Third Council District Medical Society was held at French Lick October 30.

The Treatment of Pneumonia was the title of a paper by Dr. C. T. Wolfe, in which he suggested that caution be exercised in the use of the "new discoveries" and much lauded remedies now upon the market, giving preference to more of the remedies which have proved themselves valuable in assisting Nature to combat the disease. The cardinal points in the management of croupous pneumonia are: to watch closely the condition of the heart, the respiration and the general strength of the patient, remembering that we have, as yet, no proven specific for the prevention or care of this disease. The best of the heart or circulatory stimulants are alcohol, in the form of good whisky or brandy, digitalis and strychnine.

Dr. Geo. D. Kahlo, of French Lick, opened the discussion by saying that he considered it wise to be very cautious in the administration of morphin in treating croupous pneumonia. It is a disease which is characterized by marked prostration, and at the same time there is very rapid reduction of the respiratory area. Hence, above all, in this disease there is decided embarrassment of the respiratory function, and morphin, being as it is, a powerful respiratory depressant, should be administered very sparingly, if at all, and then only for the relief of intense pain, such as localized pleuritis, etc. Caution should also be used in the use of cardiac depressants in pneumonia. Dr. Kahlo emphasized the importance of the general hygienic management of pneumonia, especially the value of an abundance of pure, fresh air.

Dr. J. P. Soll mentioned the high death rate in chronic alcoholic subjects, and gave it as his experience that even though we discard the alcoholic stimulants and resort to strychnine and digitalis these patients die, in a large percentage of cases.

Dr. C. W. Dowden, in referring to the use of cardiac sedatives and stimulants, said that he frequently finds it quite difficult, from observing the blood pressure as indicated by the radial pulse, to decide whether a sedative or a stimulant is indicated. For ascertaining the correct blood pressure he has employed the sphygmomanometer in several recent cases of pneumonia, as also in other affections, with excellent results.

Dr. W. J. Leach said that the treatment of pneumonia was out of his line, but in his general practice in former days it was his experience that better results were obtained from strict attention to the hygiene, fresh air, nursing, etc., than from excessive medication.

Dr. C. H. Emery condemned the use of the various clay or medicated mud dressings which are now so numerous upon the market, and which are so highly lauded by the laity (and some physicians) as all but specifics in pneumonia. He believes that their use

in pneumonia not only does no good, but that they frequently do actual harm by their weight and by impeding free excretion by the integument. He frequently tells his patients that if they must use mud they use it over his protest, and further that they should not deceive themselves but go out into the back yard and prepare their mud at home, as in this way it may be secured fresh every day.

Dr. J. B. Duncan spoke of the use of the ice bag and ice cap in pneumonia. He thinks that Dr. Kahlo's advice as to the wisdom of treating these cases in the open air is excellent, as under this treatment patients cough less, suffer less from dyspnea, and convalesce more promptly.

Dr. J. Bodine Stalker referred to the use of oxygen gas in the treatment of pneumonia.

Some Common Skin Affections and Their Treatment was the title of a paper by Dr. Stalker.

Fracture of the Patella was discussed by Dr. Riley Shrum.

Mitchell was selected as the next meeting place of the society, the exact date to be decided later.

Following the meeting the members were entertained at a splendid luncheon at the French Lick Springs Hotel, with Dr. Kahlo as host.

Adjourned. RILEY SHRUM, Secretary Pro Tem.

SIXTH COUNCILOR DISTRICT MEDICAL SOCIETY.

The fifth annual meeting of the Sixth Councilor District Medical Society was held at Rushville, December 3. Dr. D. W. Stevenson, of Richmond, councilor for the district, presided. There were one hundred doctors in attendance.

School Hygiene was the title of a paper by Dr. T. Henry Davis. He gave a detailed description of the ideal building and equipment. Twenty-eight cubic feet of air per second should be continually furnished, distributed and removed. Vaccination should be enforced. No teacher with tuberculosis should be employed. In Batavia, N. Y., they provide a special teacher whose function is to become acquainted with the varying ability of the pupils, and during study hours to assist those falling behind. The teacher does not hear lessons, but merely assists in preparation, and the health of the students increased 50 per cent. as a result. The absolute importance of having defective vision corrected and adenoids removed was insisted upon.

In the discussion Dr. Hurty stated that he had just examined a school in Rushville in which he found a number of children suffering for the lack of medical attention. Defective eyes, crooked spines, adenoids, anemia and chorea were all found in one room.

Echinacia was the title of a paper by Dr. E. P. Weist, of Liberty. This drug had been used by the writer with much success in gastro-intestinal diseases, septic and specific infections. It increases the weight and promotes the appetite. It can be used both locally and internally. Preparations made from the green product gives the best satisfaction. A number of the doctors stated that the drug had given them excellent results.

Rheumatism was the title of a paper by Dr. C. A. Barnes, of Greenfield, in which the etiology and treatment were very fully treated.

Dreams was the title of a paper by Dr. T. C. Kennedy, of Shelbyville. The doctor apparently believes

that Dr. McCormack and some of the other officers of the A. M. A. have been dreaming when they make reflections on the country doctors being cheap doctors because they accept a \$3 fee for insurance examinations. Dr. Kennedy showed three samples of preparations prepared by Indianapolis druggists from the same prescription which he had written, which were entirely different in their appearance. His conclusion was that it was better to get the prescription in the original wrapper from the large drug houses than to write prescriptions, which were often copied and otherwise abused.

There were many good points in the paper, but the general trend of the discussion was in favor of the higher fees and approval of Dr. McCormack and his co-workers, who, if they were better known, could not be misunderstood, but would be intensely appreciated by every ethical physician for their great work.

The Future Hygiene was the title of a brilliant paper by Dr. J. N. Hurty. He said that diseases of the heart and kidney, which have been increasing lately, will be met with the new hygiene, which will be largely personal prophylaxis. The subject of diet will assume a pre-eminent importance. The care of the teeth, and adenoids in childhood, and the prevention of auto intoxication at all times will add not only to length of days but breadth of life, as well as increased happiness. The society was so pleased with this paper that a motion was made that it be published for wider distribution.

In the discussion of Dr. Davis' paper, entitled "School Hygiene," the great importance of medical inspection of school children was discussed, and finally the following resolution was adopted:

WHEREAS, It is a fact well known in medicine, that at least 40 per cent of school children suffer from and are retarded in their studies on account of defects of sight and hearing, and on account of mild attacks of infectious diseases and other forms of illness, and

WHEREAS, Medical inspection is the only means by which the little sufferers can be discovered and relieved; therefore be it

Resolved, That the Sixth Councilor District Medical Society, in session December 3, 1908, at Rushville, Ind., urges the authorities of the state to adopt and enforce said medical inspection of school children in order that the child life of the state may be conserved to our honor and profit.

Adjourned. D. W. STEVENSON, President.

BOOK REVIEWS

PROGRESSIVE MEDICINE, Volume 4, December, 1908. Edited by H. A. Hare, M.D. Pp., 333. Quarterly Paper, \$6.00 per annum. Lea & Febiger, Philadelphia.

This volume is given over to a consideration of diseases of the digestive tract and allied organs, the liver and pancreas, diseases of the kidneys, surgery of the extremities, tumors, surgery of joints, shock, anesthesia, and infection, genito-urinary diseases, and concludes with a practical therapeutic referendum.

While all of the sections are well written, particularly so is that of Bloodgood on the surgical section, wherein he gives rather a comprehensive review of the recent work done in blood-vessel surgery, as well as that on the etiology and diagnosis of malignant disease.

DIET IN HEALTH AND DISEASE. By Julius Friedenwald, M.D., Clinical Professor of Diseases of the Stomach in the College of Physicians and Surgeons, Baltimore; and John Ruhrhäl, M.D., Clinical Professor of Diseases of Children in the College of Physicians and Surgeons, Baltimore. Second revised edition. Octavo of 728 pages. Philadelphia and London: W. B. Saunders Company. Cloth, \$4.00 net; half morocco, \$5.00 net.

This is a practical, comprehensive work on diet, prepared to meet the needs of the general practitioner, the medical student, and the trained nurse. It contains a complete account of food stuffs, their uses and chemical composition. The dietetic management of every disease in which diet plays a part in treatment is carefully considered, the articles on diet in diseases of the digestive organs containing numerous diet lists and explicit instructions for administration. The feeding of infants and children, of patients before and after anesthesia and surgical operations, and the latest methods of feeding after gastro-intestinal operations, are all taken up in detail. The subject of nutritive enemata is given completely, with recipes and full instructions as to technic.

A TREATISE ON DIAGNOSTIC METHODS OF EXAMINATION. By Prof. Dr. H. Sahli, of Bern. Edited, with additions, by Francis P. Kinnicutt, M.D., Professor of Clinical Medicine, Columbia University, N. Y., and Nath'l Bowditch Potter, M.D., Visiting Physician to the City Hospital and to the French Hospital, and Consulting Physician to the Manhattan State Hospital, New York. Philadelphia and London: W. B. Saunders & Company. Octavo of 1008 pages, profusely illustrated. Cloth, \$6.50 net; half morocco, \$7.50.

Dr. Sahli's great work, upon its publication in German, was immediately recognized as the most important work in its field. Not only are all methods of examination for the purpose of diagnosis exhaustively considered, but the explanation of clinical phenomena is given and discussed from physiologic as well as pathologic points of view. The examinations of the stomach, sputum, feces, urine, and blood are exhaustively treated. In the chemical examination much attention is directed to describing methods; and this is done so exactly that it will be possible for the clinician to work according to these directions. This edition contains all the material of the new fourth German edition.

DISEASES OF THE SKIN, A READY-REFERENCE HANDBOOK. By George Thomas Jackson, M.D., Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York. Sixth edition. 12mo, 737 pages, with 99 engravings and 4 plates, in colors, and monochrome. Cloth, \$3.00, net. Lea & Febiger, publishers, Philadelphia and New York, 1908.

This is an excellent text-book, and its popularity is attested by the fact that it is now in its sixth edition. The present edition has been carefully revised and new matter incorporated with a view to bringing it thoroughly up to date. The author has discussed the various topics in a concise yet very clear manner, and the discussion of the various diseases of the skin in alphabetical order makes the book a ready reference manual. Each disease is considered in full, beginning with

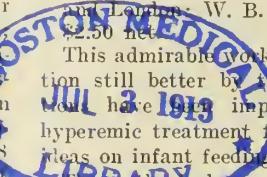
synonyms and proceeding through the symptoms to the etiology, pathology and diagnosis, and two especially full sections on treatment, covering all varieties and complications. The book is rich in formulæ of approved value and concludes with an excellent index.

The convenient size, numerous illustrations and good mechanical work on the part of the publishers add to the value of the work for the use of practitioner as well as student.

PRACTICAL LIFE INSURANCE EXAMINATIONS, WITH A CHAPTER ON THE INSURANCE OF SUBSTANDARD LIVES. By Murray Elliott Ramsey, M.D. Cloth. Pp., 231. J. B. Lippincott Company, Philadelphia and London, 1908.

This is a most excellent little guide for the average life insurance examination. Though brief and concise in its makeup, yet much ground is covered and much touched upon. We regret that nothing is included of the microscopic examination of urine, for it is the lack of such examination that renders many a urinalysis for life insurance absolutely worthless.

OBSTETRICS FOR NURSES. By Joseph B. DeLee, M.D., Professor of Obstetrics in the Northwestern University Medical School, Chicago. Third revised edition. 12mo of 512 pages, fully illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$2.50 net.

 This admirable work has been made to fulfil its function still better by the third revision. Old illustrations have been improved, new ones added; Bier's hyperemic treatment for mastitis described and newer ideas on infant feeding incorporated.

Dr. DeLee's large experience as a teacher of both obstetrics and obstetric nursing affords an unusual opportunity for making his work one of the best of the standard ones on the subject.

A TEXT-BOOK ON THE PRACTICE OF GYNECOLOGY. By W. Easterly Ashton, M.D., LL.D., Professor of Gynecology in the Medico-Chirurgical College of Philadelphia. Third edition. Thoroughly revised. Octavo of 1096 pages, with 1057 original line drawings. Philadelphia and London: W. B. Saunders Co. Cloth, \$6.50 net; half morocco, \$7.50 net.

This new third edition of Dr. Ashton's *Gynecology* has been carefully revised and the subject matter and illustrations brought up to date in order that the most advanced and sound teachings in the field of gynecology would be clearly described. Some of the additions to this edition are: Colonic lavage and flushing, Hirst's treatment of vaginismus, Dudley's treatment for cystocele, Montgomery's round ligament operation, Chorio-epithelioma of the Uterus, Passive Incontinence of Urine, and Moynihan's methods for Intestinal Anastomosis. Dr. Ashton not only tells his readers in every instance what should be done, but also precisely *how to do it*. A distinctly original feature consists of the 1,057 illustrations, made especially under the author's personal supervision from actual apparatus, living models, and dissections on the cadaver.

This is an excellent work for the general practitioner, and the fact that three editions have been required in eighteen months indicates that Dr. Ashton's books fill a long felt want.

THE JOURNAL OF THE *INDIANA STATE MEDICAL ASSOCIATION*

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY under Direction of the Council

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ORIGINAL ARTICLES

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from page 4, Vol. II.)

PROGRESS IN PRACTICAL MEDICINE.

"To determine the line of practice pursued by the physicians who lived here at an early period, the only means at my command are the medical books I find in their libraries and the few notes in manuscript which some of them have left behind. I can not ascertain that any of these men had a line published indicating their views of the pathology or treatment of disease. But we can always safely judge men by the kind of company they keep, and so we may judge our old physicians by the books they read. If Dr. Tisdale was guided by Sydenham, as he no doubt was, until 1795, when he came into possession of Cullen's First Series in Medicine, we may well conclude that his remedies were few and simple. That our old physicians employed the same formulas that were advised by Sydenham is not claimed, for we know that many of their remedies consisted of the plants and roots that were indigenous in our forests or were grown in the gardens. Medicines that were manufactured only in England, France or Germany, at that time, were very scarce and expensive, and substitutes were employed when possible. As a tonic the Peruvian bark had become popular, much more so than when Sydenham expressed his doubts about its safety, and advised that it should never be used until the system was prepared to receive it by bleeding, purgatives and emetics. I find, however, that physicians and

people relied upon such tonic medicines as they could easily obtain from the forest; one, especially, which was considered a most wonderful remedy in many forms of disease, was Fontany root, which is a species of gentian. It is still used by a few old French families.

"Dr. McKee often prescribed the sumach berries, to be infused in water, as a cooling drink in fevers, and as an aperient instead of cream of tartar.

"The next great work which came into the hands of our early physicians was Dr. Rush's Medical Inquiries and Observations, in which we find the dawning of that great philosophy in American medicine which we see so strikingly illustrated in the practice of many of our physicians of the present day, but which unfortunately did not obtain with some of our great writers in the early part of this century.

"Drs. Tisdale and McKee died in 1807-9, but Drs. Key Kendall and McNamee were here then, and in 1811-12 Drs. Skull and Lane came to Vincennes, but neither remained long. They all followed Cullen and Rush, though Dr. Rush's works were not here until 1813. The next author that I find is Dr. Thomas' work on Practical Medicine, published in 1817 in London. He was never a popular author in America; was considered entirely too timid and temporizing in his practice. Up to this time the only treatment employed in pneumonia was bleeding, tartar emetic and calomel, and neither Drs. Tisdale, McKee, McNamee, Key Kendall, Lane or Decker had ever heard of auscultation as a means of diagnosis in lung and heart diseases. I find the work of Corvisart on the Heart in this old library, but he never dreamed of the advances that were to be made in our knowledge of cardiac diseases. In pneumonia, however, the old treatment of bleeding, evacuants and such

depressing agents as tartar emetic, has given place to one that is more rational and far more successful. There is not a physician in Vincennes, so far as I am informed, that pursues the old treatment in pneumonia.

"In that period, extending from 1815 to 1830, it is evident that our physicians here pursued the line of treatment that then prevailed in Philadelphia, Virginia, Kentucky, Tennessee and Natches, Miss. Among the old books are many works, monographs and articles in medical journals on fevers, bowel affections, lung diseases and others which were prevalent in this climate, written by such distinguished men as Eberle and Calhoun, of Philadelphia; John Esten Cooke, then of Virginia, afterward Louisville, Ky.; Samuel A. Cartwright, of Natchez, and others. Dr. Cartwright probably exercised more influence over the physicians here, as he was raised in this state not more than twenty-five miles from Vincennes. He was an able writer and was well calculated to please those who were inclined to adopt a bold and active treatment, as most western and southern physicians were at that time. He bled freely, but placed his greatest reliance upon large doses of calomel. From 20 to 100 grains were his favorite doses, and he claimed that the medicine was much milder in its action when given in large doses than in small ones. His formula for cholera was 10 grains each of calomel, capsicum and camphor gum, repeated every half-hour. Dr. Hitt, of this city, informs me that he employed this treatment in the cholera here. His treatment of apoplexy was so very singular that I will briefly refer to it. He claimed that the immediate cause of death in apoplexy was the accumulation of phlegm in the air passages, in consequence of the failure of the pneumogastric and phrenic nerves to properly stimulate the respiratory muscles, and, therefore, the patient died, asphyxiated. Bleeding, he contended, only increased the difficulty, and he relied entirely on what he termed apoplectomics, which consisted of capsicum 10 grains, mustard 10 grains, common salt 10 grains, and calomel 10 grains, to be crammed down the patient's throat with a cloth wrapped around a stick, to be repeated until there was free vomiting and purging. In old persons I have seen the remedy act exceedingly well."

Another article bearing upon the very early medical history of Indiana is that by Hubbard M. Smith, M.D., Vincennes (*Transactions of the Indiana State Medical Society, 1906*), which is herewith reproduced:

MEDICINE IN THE NORTHWESTERN TERRITORY; A CONTRIBUTION TO THE EARLY MEDICAL HISTORY OF INDIANA.

"At the first annual meeting of the Second District Medical Society of Indiana, it occurred to me that it would not be inappropriate for its members to take a retrospect of the doings of our coadjutors, in their lines of action, about a century ago.

"The first medical society organized in the Northwestern Territory, wrested from the British government by Col. George Rogers Clark on Feb. 25, 1779, occurred in Vincennes, Ind. The exact date is not positively known, but I know for a fact that its origin was prior to the year 1818. Goodspeed, in a history of Knox County, published twenty years ago, states that, 'in 1817, the physicians of this place met and formed a medical society.' Presumably, a society was then, or at an earlier period, formed, for I have evidence, obtained from a newspaper published in this town in 1818, in a call, printed therein, for a meeting of a medical society in that year, and my recollection is that Drs. Dinwiddie and Truesdale were members. No known records of this society exist.

"Another society was organized here in 1827, and, on June 5, elected the following officers, viz.: Drs. E. McNamee, president; J. Kuykendall, treasurer, and H. Decker, secretary. Present: Drs. J. D. Wolverton, J. K. O'Haver and Philip Barton. This society bore the title, 'The Medical Society of the First Medical District of Indiana.'

"It will thus be seen that the name of this society was almost identical with our new district organization. The extent of territory the society embraced I know not, but it doubtless was as great as that of this organization. The membership embraced the names of the following doctors, to wit: Philip Barton, G. G. Barton, Joseph Brown, G. G. Barry, B. J. Batty, Hiram Decker, H. Davidson, W. Dinwiddie, John W. Davis, Joseph P. DeBruler, A. Elliott, William Fairhurst, W. W. Hitt, Hezekiah Holland, R. B. Jessup, J. Kuykendall, Alexander Leslie, E. McNamee, Joseph Maddox, F. M. McJenkin, N. Mears, John R. Mantle, Thomas Nesbit, J. H. O'Haver, T. F. Offutt, Joseph Porter, J. W. Posey, J. W. Pennington, Joseph Somers, Daniel Stahl, J. S. Sawyer, O. G. Stuart, G. B. Shumard, Hubbard Madison Smith, Thomas B. Thompson, J. D. Wolverton, W. C. Warner and Daniel Dinwiddie.

"By a reference to the records of this society some interesting facts are gleaned, not the least

important of which is that of the existence at that time—1827—of a state medical organization. If I mistake not, the state medical society, organized in 1849, is supposed to have been the first state organization, which is an error. To controvert that opinion, I herewith quote from the Transactions of the Vincennes Medical District Society the following:

"This society proceeded to elect delegates of the State Medical Society, which resulted in the election of Drs. J. D. Wolverton, for three years; Hiram Decker, for two years, and Philip Barton, for one year.

"Resolved, That this society do allow the sum of ten dollars to the delegate or delegates annually to the state medical society."

"And, in 1830, a like sum was appropriated for expenses of delegates. These records establish the fact that a state medical society existed as early as June 5, 1827, and perhaps earlier, and the one organized in 1849 was the second state society.

"Goodspeed's history of this society states that there was no standard pharmacopeia in the United States at that time, and that it sent a memorial to Congress to appoint a committee of competent physicians to compile one. This district medical society continued to hold meetings that were recorded up to March 23, 1835, and occasionally meetings occurred as late as 1854, of which the writer is cognizant, as he became a member of it in May, 1849, and knows of the admission of Dr. George B. Shumard in June following, and Dr. Robert B. Jessup in February, 1854, as the treasurer's book shows; yet no records are known to exist recording the doings at the meetings subsequent to March, 1835. It is worthy to note in giving the medical history, especially concerning the physicians of this medical district and town of Vincennes, that an attempt was made to establish a medical school here in 1839. The charter of the Vincennes University, granted by the Territorial Legislative General Assembly, gave it authority to establish branches, besides literature, those of theology, law and medicine; and, although I find no record in the transactions of the University Board of Trustees, in a petition recorded there, from the physicians asking for the use of a part of its building, in which to teach medicine and its branches. The right to the ownership of the building being in controversy between the university and the State of Indiana, the petition was not granted, and the project fell through, and no further record of it exists.

"In looking over records of this society, I find little in them worthy of note. With the excep-

tion of one paper presented by Dr. W. W. Hitt, which was ordered to be forwarded to the *Medical and Physical Journal*, edited by Dr. Drake, at Cincinnati, Ohio, and to the *Transylvania Medical Journal*, Lexington, Ky., for publication, there is little more than routine meetings recorded, embracing the elections of officers, granting diplomas, at \$5.00, and a good deal about contributions, by-laws and medical ethics. Why the transactions were not recorded after March, 1835, is a matter of conjecture. As a matter of fact I know personally that members were received into the society as late as February, 1854, the members being the writer, in May, 1849; Dr. G. B. Shumard, June, 1849, and Dr. Robert B. Jessup, February, 1854.

"This district society having ceased to have a vital existence, a call was issued for a meeting, at the city hall, of the physicians of Knox County, June 24, 1875, when the 'Knox County Medical Society' was organized, the following named physicians being present: F. W. Beard, A. J. Thomas, James F. Origan, Hubbard M. Smith, J. W. Pugh, W. W. Hitt, W. H. Wise, W. B. Sprinkle, O'Connel Fairhurst, J. N. Merritt, A. J. Haughton, Alfred Reel, John C. Beever, John R. Mantel, W. B. Harris, and M. Witherspoon.

"This society became affiliated with the state medical society, and maintained its organization until it was adopted by the new state organization.

"On Oct. 26, 1875, a new medical society was organized in this city, composed of physicians of the States of Illinois, Kentucky and Indiana, under the title of the Tri-State Medical Society. The organization elected the following officers: Drs. Joseph Thompson, Kentucky, president; W. A. Smith, Illinois, J. K. Letcher, Kentucky, and J. B. Armstrong, Indiana, vice-presidents; Geo. W. Burton, Indiana, corresponding secretary; F. W. Beard, Indiana, secretary, and Alfred Patton, Indiana, treasurer. Other attending members were: Drs. John R. Mantel, Hubbard Madison Smith, Willis W. Hitt, John C. Beever, William H. Beeson, Robert B. Jessup, Vincennes; J. S. Dukate, Wheatland; John T. Freedland, Freelandsville, and Martin Witherspoon, Bruceville. These three states comprised originally the scope of the society, but it permitted physicians of other states to join it, and in a few years its numbers had so increased, and become so cosmopolitan in character, that it lost its identity, and assumed that of Mississippi Valley Medical Association. After meeting a few times in the states it originally comprised, it met in St. Louis, and thereafter in many distant states, and the new organization soon rivaled in mem-

bership and power, almost, the American Medical Association.

"About eight years ago another district medical society was organized, which was composed of physicians of the counties of Knox, Daviess, Pike and Gibson, but it has been superseded by this, the Second Congressional District Medical Society.

"The foregoing may be considered as prosy matter, but, as it embraces concise early information as to the time of the formation of the first medical society of the northwest, and the names of some of its members, and the medical organization following, to the present time, especially as it relates to societies in county and district; yet I give it as a matter of medical history for the present, as well as for those doctors who will take our places in the coming years that it may be a matter of record ere time relegates the facts embraced herein to the vale of oblivion."

(*To be continued.*)

EPIDEMIOLOGY OF TYPHOID FEVER.*

H. O. BRUGGEMAN, M.D.

FORT WAYNE.

My chief object in bringing this subject to the attention of the society is to emphasize, first, that typhoid fever is contagious as well as infectious, and, second, that a vast multitude of factors may be concerned in its spread. The important rôle played by polluted water has so overshadowed all other sources of infection that many physicians seem to have forgotten that a very large percentage of the cases of typhoid fever are not water-borne, and I feel safe in saying that in Fort Wayne polluted water plays a minor part.

Typhoid fever is a general infection, a true septicemia; and it naturally follows that the infecting organism may be excreted through several channels. The bacillus generally escapes from the body in the urine and feces; the bacilli in the feces come in large part from the bile, while those in the urine, as a rule, pass directly through the kidneys from the blood stream. It is not unusual for the sputum to be loaded with the organisms, especially when pulmonary complications are present. The portal of entry of the bacillus is probably always through some portion of the alimentary tract, but whether this portal is in the tonsils, in the gastric or the intestinal mucosa, is unknown.

At this point it may be well to consider a theory recently advanced in France by Guiart that intestinal worms, especially whip worms, play an inoculating rôle in typhoid, cholera, etc., similar to the rôle played by fleas in bubonic plague. This interesting theory recognizes an analogy between the external skin and the intestinal mucosa in that they are both constantly soiled with pathogenic bacteria, but in the absence of a cut or wound the bacteria are unable to penetrate and produce morbid processes. If parasitic worms are present in the intestine they may wound the mucosa and open the door to infection, so Guiart proclaims the aphorism, "No intestinal infection without parasitic worms to open up the way for the infectious microbes." If this theory would be substantiated the prevention of typhoid would in a large measure reduce itself to the prevention and treatment of whip worms. An examination of 200 cases of typhoid by the officers of the Hygienic Laboratory P. H. and M. H. S. revealed intestinal worms in only 7½ per cent., which would indicate that this theory is fallacious.

An important factor in the spread of typhoid is the existence of so-called "bacillus carriers" (bacillen-trager). About 3 or 4 per cent. of those who have had typhoid continue to excrete virulent bacilli for longer or shorter periods after convalescence. Outbreaks of typhoid in asylums and other public institutions have been repeatedly traced to these bacillus carriers. Libertau, in 1905, while seeking the source of a small epidemic of this disease, discovered the bacillus in almost a pure culture in both the urine and feces of a man who had suffered from typhoid in 1896. Kayser has reported finding the organism in the feces of a woman thirty years after her recovery from the disease, while Lentz isolated the bacillus from a woman's feces forty-two years after she had had an attack of typhoid. The organism has been recovered from the sputum seven weeks after recovery.

Of almost equal importance with these bacillus carriers is a group of persons who discharge typhoid bacilli, in both urine and feces, for long periods of time, but who have never experienced any clinical symptoms of the disease. A classical instance is related by Libertau, who found bacilli in the evacuations of a woman two years after she had nursed two cases of typhoid. The woman was well and had never been sick.

The atypical cases of typhoid are also deserving of attention. Typhoid fever exists in myriad forms, varying from slight attacks of so-called biliaryness to cases with abrupt onset and sudden death. It should be remembered that the char-

* Read before the Indiana State Medical Society, at French Lick, June 18, 1908.

acteristic symptoms of this disease are not the result of intestinal lesions, and when the intestinal lesions exist they are in all probability secondary changes. Not only may typical typhoidal symptoms be present with no intestinal lesions, but severe typhoid ulceration of the intestine with no symptoms has been reported by Velich. Drigalski states that the typhoid bacillus may localize in any organ of the body, and the disease has been known to resemble influenza, bronchitis, gallstone, colic and the various anginas.

A great deal of study has been given to the question as to how long the *Bacillus typhosus* may retain its vitality and virulence under various conditions outside the human body. Contradictory results have been obtained by the different investigators. It may be said, however, that direct sunlight rapidly destroys the life of the bacillus; when dried in the dark it remains viable for many days. It is unaffected by repeated freezings and thawings. In water the bacillus retains vitality for periods ranging from a few days to many, depending on the amount of organic material present and the absence of direct sunlight and other adverse conditions. The organism has been recovered from soil which had been enriched by organic material from time to time, eleven months after inoculation, and it undoubtedly retains its vitality for many days in ordinary earth. For six months the bacillus has remained viable and virulent in blankets. It can survive for at least three days on the external parts of the ordinary house fly. The bacillus finds a congenial culture medium in milk and on the cut surface of a boiled potato.

It is evident that the bacillus may enter the body through a vast number of agencies. In a general way it may be stated that every case of typhoid fever is due to the presence of excreta on food or fingers or in some place where excreta should not be. The importance of finger infections has until recently received but scant attention in America. The fingers of one in attendance on a case of typhoid are a menace to both their owners and the public. Infected fingers may contaminate food products and other objects, and there is no doubt but what typhoid fever in nurses and physicians is generally the result of the direct transmission of the bacillus from the fingers to the mouth.

H. Conradi, in a study of eighty-nine cases which he attributed to infection by contact, observed that 58 per cent. of the secondary cases had onset of illness during the first week of the illness of the primary cases, indicating that

many of the secondary cases must have received the infection during the incubation period of the primary cases. Contrary to the accepted opinion, Conradi believes that the infection is transmitted most often in the earliest stages of the disease and frequently during the incubation period.

Outbreaks of this disease, especially in military commands and among laundresses, have been repeatedly traced to infected bedding and clothing; there is no doubt but what "rummage sales" transmit this as well as other contagious diseases. The great importance of flies as carriers of the contagion has been generally recognized since the report on typhoid fever in the military camps in 1898, when it was shown that flies carried the infecting organism directly from the feces of typhoid patients to the food of the soldiers. A most interesting pamphlet has recently been issued by the New York Chamber of Commerce which attributes the prevalence of typhoid in that city to flies which receive the infecting organisms at the sewer outlets on the water front. In India and South Africa dust has been looked upon as a possible and likely medium of transfer of typhoid. Hurty has attributed epidemics of the disease to the blowing about of dust containing the evacuations from the toilet rooms of railroad passenger trains, and he claims that, because of the presence of this infected material, typhoid is common in areas contiguous to the great belt lines. Water polluted by sewage, the seepage from infected ground, etc., etc., has, of course, been the cause of most great epidemics of typhoid. A beautiful illustration of the spread of typhoid from this source occurred in Fort Wayne, where an epidemic, which was almost confined to the vicinity of the Pennsylvania Railroad shops, was traced to a connection between the city mains and the pipes of the railroad company. The water supply of the shops was drawn unfiltered from a polluted source, and, as the pressure carried in the city pipes was lower, the houses in that neighborhood were receiving this contaminated supply. Water, even when not used for drinking purposes, may be a source of infection; cases of this kind are reported where the water was used on tooth brushes and in a nasal douche. Soft drinks made from infected water are as dangerous as the water itself.

It is apparent that any variety of food may become infected and transmit the disease. Next to water, milk plays the most important rôle in the epidemiology of typhoid fever. Kober has collected 195 epidemics occurring in different parts of the world due wholly to milk. Most of

these epidemics were traced to cases of typhoid on the dairy farms. The bacillus most frequently enters the milk from contaminated fingers; sometimes the same hands that nurse the sick milk the cows. Bacillus carriers and atypical cases are a live problem in this connection. The milk may also be infected by flies or by the use of polluted water to wash the cans and other utensils.

Recently our attention was arrested by the fact that a number of typhoid cases were occurring along the route of a small dairy; an investigation of the dairy revealed a typhoid convalescent, an overflowing vault, and a swarm of flies which alternately feasted at the contents of the vault and the interior of the milk strainer. With the closing of the dairy, typhoid in this locality ceased. Newman gives the following as the characteristics of milk-borne epidemics:

- (a) There is a special incidence of disease upon the track of the complicated milk supply. It is localized to such areas.
- (b) Better-class houses and persons generally suffer most.
- (c) Milk drinkers are chiefly affected and they suffer most who are large consumers of raw milk.
- (d) Women and children suffer most, and frequently adults suffer proportionately more than children.
- (e) Incubation periods are shortened.
- (f) There is a sudden onset and rapid decline.
- (g) Multiple cases in one house occur simultaneously.
- (h) Clinically the attacks of the disease are often mild. Contact infectivity is reduced and the mortality rate is lower than usual.

When we consider the prevalence of typhoid and consider the ease with which Eberth's bacillus may be transferred from patients to the milk, it is strange that many more outbreaks of the disease are not directly traceable to this source. In passing, it may be well to remark that a polluted milk supply, like a polluted water supply, has no excuse in a civilized community. Butter-milk, ice cream, cheese and butter made from milk containing typhoid bacilli, may at times be the cause of infection. Among food products oysters stand second to milk as disseminators of typhoid. Several epidemics have been traced to fresh vegetables, enterprising Chinese gardeners having sprinkled the vegetables, for fertilizing purposes, with a mixture of water and human feces.

I know of no better way to conclude this paper than with the following statement of Sedgwick and Wilson: "Food, fingers and flies offer an alliterative summary of the most common agents.

Filth is the fundamental condition for the spread of typhoid fever, and cleanliness a universal panacea for its eradication. The fact which stands out with especial clearness, in studying the subject, is that, in spite of all that may be said and has been said to the contrary, typhoid fever is a contagious disease."

THE DISPOSAL OF SEWAGE IN SMALL TOWNS.*

GEORGE B. LAKE, M.D.
WOLCOTTVILLE, IND.

As soon as human beings began to live together in tribes or communities and to remain in residence in the same locality for long periods of time, it became necessary for them to make some provision for the disposal of the excretory products of their bodies, so that they themselves might live in comfort, and that the favorable location which they had chosen as an abiding place might not become so polluted as to be an unfit residence for their children.

At first these attempts at sanitation consisted merely of such precautions as the beasts take, and in migratory communities this matter had made little further progress in the time of Moses, for we find him giving the command, "And thou shalt have a paddle upon thy weapon, and it shall be, when thou wilt ease thyself abroad, that thou shalt dig therevith, and turn back and cover that which cometh from thee," even as we see the domestic cat doing to-day. But there was deep scientific philosophy embodied in the command of the great Hebrew leader, even if he did not realize the why and wherefore, which perhaps he did. Who can say?

In more stable communities a more advanced method of disposal had to be evolved, as this simple procedure would soon have led, in thickly settled districts, to almost as serious pollution as simply leaving the material upon the ground. The next step, then, was to have a certain portion of the camp where all went to relieve their necessities, leaving other parts clean, and the next was for each family to have a particular place set aside for this purpose; and so the privy was evolved, and remained for centuries practically the only attempt at sewage disposal, thus leaving the matter wholly in the hands of the individual householder, as it still is to-day in the smaller communities with which we shall concern ourselves.

* Read before the Indiana State Medical Society at French Lick, June 18, 1908.

The old-fashioned privy, where excrement is deposited upon the ground or in a simple hole dug under the building, is a disgrace to twentieth-century knowledge and civilization and it must go, and in order that we may intelligently decide what shall take its place a brief review of modern investigations and ideas upon the problem of sewage disposal will be in place, and we shall then see how they may be applied to the subject under consideration.

There are recognized to-day seven general methods for the disposal of sewage, namely: (1) Dilution, or emptying the sewage into some large body of water, as rivers, lakes or the sea; (2) broad irrigation, or sewage farming, accomplished by spreading the sewage over a large area of land and working it in; (3) chemical precipitation, for the purpose of throwing down substances dissolved and suspended in the sewage, thus rendering it cleaner; (4) intermittent sand filtration, which is a modification of the broad irrigation method; (5) the septic tank, by which anaerobic putrefaction is made use of; (6) the contact process, depending for its usefulness upon the action of aerobic bacteria, and (7) the continuous trickling process, over coarse filtering material, accomplishing the same result as No. 6, but more rapidly.

To these various methods we must add another, which is applicable when we are considering the disposal of excrement alone, and that is cremation. This method, in families where the more fluid parts of the sewage, such as dish water, kitchen slops, bath water, etc., are thrown on the garden or carried off by means of an underground drain, and so disposed of by broad irrigation or by dilution, is particularly applicable and is the most sanitary arrangement possible, followed, next in order, by the earth closet, which will be discussed later.

The disposal of excrement by cremation requires a special apparatus, the cost of which deters many from using it, but when a family is willing to incur the necessary expense a very satisfactory arrangement can be purchased from the International Incinerator Company, of Buffalo, N. Y., for \$40. This apparatus receives excrement, garbage or any material whatever, which may be burned at any time, without odor in the room or at the top of the chimney, by virtue of a special device which conducts the gases arising from the combustion of the waste matters to a point below the fire pot, so that all such gases pass through the fire and are consumed. This incinerator can be set up in any room where there is a chimney connection, and is operated as easily as any stove.

Of the various methods for disposing of the entire sewage, the ones which interest us are dilution, broad irrigation or sewage farming, the septic tank and the contact filter process or bacteria bed.

The method and object of the first is so simple as to need no explanation, and its operation is efficient where the water into which the sewage is discharged is sufficiently extensive, and where there are no other families or communities who would be annoyed or endangered by use of such water. For instance, there would be no objection to a farmer's emptying his sewage into a small stream or lake, provided that such body of water was not used as the source of domestic supply by some other family or community, and also provided that no other family or community was in such close proximity to the place of such emptying that it would constitute a nuisance.

But, in truth, this is a solution of the problem which is no solution, for, while it is not likely that a nuisance will result if the flow of water is fifty times as great as the flow of sewage (Hering says forty-five times and Goodnough thirty-six), still, as the country becomes more and more thickly settled, the problem will eventually have to be solved in some other manner, and trouble and expense will be saved by making such arrangements as will provide for the future as well as for the present. The force of this contention has been realized by many communities in the past. When, in 1847, the sewage of London was first discharged, as a whole, into the Thames river, it seemed that the problem was solved, but in 1858 the condition of the river became intolerable and other measures had to be adopted, and so, while it would be practicable to utilize this method in the circumstances under discussion, it would not be advisable.

The second method which interests us is sewage farming. This is the method which is made use of by the housewife when she throws out her dish water on the garden, and this was, in effect, the method recommended by Moses. And it is a very good and applicable plan when carried out properly, as is not done in the ordinary privy, which not only becomes a nuisance in warm weather by reason of the foul odors arising from it, but which leaves the putrid and bacteria-laden material which it contains open to the depredations of flies, which then, with their feet and bellies laden with this material, enter our houses and walk over our meat and potatoes, depositing their burden as they go. Such a condition as this is unnecessary, for the reason that the surface layers of the soil swarm with aerobic, nitrifying bacteria, which, when the sewage is

properly exposed to their action, give rise to an oxidation process which changes the solid organic portions of the sewage to water, gases and harmless mineral substances, the watery portions meanwhile draining off and undergoing filtration through the lower strata of the soil.

When a pan of dish water is thrown out, the water sinks from sight, leaving the grease and bits of organic matter which it contains scattered over a large area of soil where the surface bacteria can readily act upon them. But if a mass of excrement be deposited in the same location it is not sufficiently spread out or mixed with the earth for the surface bacteria to have a chance to act upon it, and hence it merely undergoes a process of organic putrefaction which causes it to become a nuisance. Now, if this same excrement be properly mingled with the surface earth the aerobic bacteria will act upon it and change it into its elements without its becoming offensive to the senses or dangerous to health, and it is so covered, mechanically, that flies have no access to it.

The foul odors, poisonous gases and contamination by flies which attend the use of the ordinary privy may be entirely avoided by exchanging it for the earth closet or dry privy, which is arranged as follows: A box is constructed of any desired length and of the height and width of an ordinary privy seat. The cover of the box is hinged so that it may be raised entire. In this cover are cut any desired number of holes, each of which should be a tight-fitting, hinged lid, and beneath each of which should be placed a suitable receptacle for the excreta. (A galvanized iron coal hod does nicely.)

A receptacle containing dry surface earth should be placed handy so that a shovelful can be thrown upon any excrement which is deposited in the receptacles. In this way the material is so mixed with earth that when the containing vessels become full they may be emptied upon the garden anywhere and lightly spaded in without giving rise to any disgusting sights or smells.

The modification of any privy already in use so as to conform to the ideas here set forth is so simple a problem in mechanics that any householder can solve it, and the necessary alterations are so insignificant that any householder can make them with the aid of a hammer and saw.

This method is applicable, of course, only in communities where every house has a garden upon which to empty the contents of the receiving pails, but in such a community this method, if carried out faithfully, will, by itself, entirely do away with the privy nuisance. Where there is no access to gardens, and where, on the other

hand, there is no municipal arrangement for sewage disposal and no waterworks, the incinerator or fire closet previously referred to is practically the only sanitary arrangement, with the well-constructed privy vault, water and fly-tight and frequently cleaned, as a rather poor second choice.

I believe that if the privy is constructed with the rear wall having a backward slope, so as to leave an opening 18 or 20 inches wide at the back, and this opening covered with a fly-tight cover, hinged to the building, that the vault can be cleaned much more easily and with less danger of loosening the joints of the building than is possible by the old method of lifting the privy off of the vault every time it is cleaned.

But we have a larger and more complicated problem to solve. Not only into the smallest towns, but even into the country, modern inventive genius is bringing the modern luxuries, foremost among which is the private waterworks system, with the installation of a bathroom and indoor closet, and when these adjuncts of civilization are installed the same problem, on a small scale, which confronts the sanitary engineer of the city confronts us, and we must solve it, under penalty of failing to do our duty by our respective communities.

And it is here that we become interested not only in dilution of sewage and in broad irrigation, but also in the septic tank and in contact filters or bacteria beds.

When private waterworks are installed we must dispose of the sewage resulting, and in doing so we meet the following sets of conditions: (1) It may be discharged into a stream which furnishes no one with water, and it may not; or (2) which stream may become a nuisance to those living near by; (3) into a stream from which others do get their domestic water supply, or into a larger or smaller body of still water, as a pond or lake, and which may (4) or may not (5) supply one or more families with water; or (6) where no water is available for its dilution it may be disposed of by broad irrigation.

In case No. 1 the problem is simple, for it is only necessary to make sure that the lowest possible flow of water shall be at least fifty times as great as the total flow of sewage emptying into it. If this requirement is met, the sewage may be simply discharged into the stream, which will purify itself within a longer or shorter distance, the rapidity of the purification being inversely proportioned to the rapidity of the current in the stream.

In Cases 2 and 5 the conditions are analogous, for crude sewage discharged into a body of still

water will always create a nuisance, and so the conditions may be discussed together.

Here the problem is merely to remove the petreable organic parts of the sewage, which, by their presence in the waters, may become a nuisance.

The first work along this line was begun in England about 1856, and the method proposed was to precipitate the dissolved and suspended organic matters by the addition of various chemicals. Such a method is in use in London to-day, but is wholly inapplicable to the conditions under discussion because it requires special apparatus and special skill, while what we require is something which will give us the maximum organic purification with the minimum trouble and expense to the householder; and such a system is found in the septic tank.

This idea of the septic tank, as we understand it to-day, was first worked out by Donald Cameron, of Exeter, England, about 1895, and consists, essentially, of an open or covered reservoir, through which the sewage flows more or less rapidly, losing its solid matters by sedimentation, and having the finer suspended substances changed into their innocuous elements by anaerobic putrefaction, so that the effluent is inoffensive to the senses. The portion which settles to the bottom also undergoes changes, by which from 75 to 80 per cent. of it is transformed into liquids and gases and passes off with the liquid portions, the remaining sludge being of a homogeneous, peaty consistency and almost or entirely free from evil odor. Some parts of the solid matter rise to the top and form a scum of about the same consistency and characteristics as the sludge at the bottom.

The action in the septic tank is probably not the work of strict anaerobes, which appear to be rare in sewage, but of organisms able to grow either with or without the presence of oxygen.

Under the latter condition their action is characteristic. They first decompose the solid material by lysis. Next they decompose the dissolved molecule, producing gases on the one hand and more stable peaty compounds on the other. Nitrogenous compounds are partially reduced to gaseous nitrogen or free ammonia, and, together with cellulose, to carbon dioxide and marsh gas.

The most important point in the construction of a septic tank is its size in relation to the flow of sewage which is to pass through it. The tank is really a sedimentation basin in which the supernatant liquid and the settled sludge both undergo fermentation.

The observations at Leeds, England, show that the best results are obtained by allowing the sewage to remain in the tank about 24 hours; that is, by making the tank of such a size as to contain the average amount of sewage produced in 24 hours by the population of the district served.

In England the average daily flow of sewage is about 25 gallons per capita. In London it is 34 gallons (report of the Royal Sewage Commission, 1902). In several small Massachusetts cities it is 100 gallons (Fuller, 1903), while in the south metropolitan district of Boston it is 250 gallons (Winslow & Phelps, 1905).

From these figures it is safe to say that the tank should have a capacity corresponding to 75 or 100 gallons per capita for the number of persons using it.

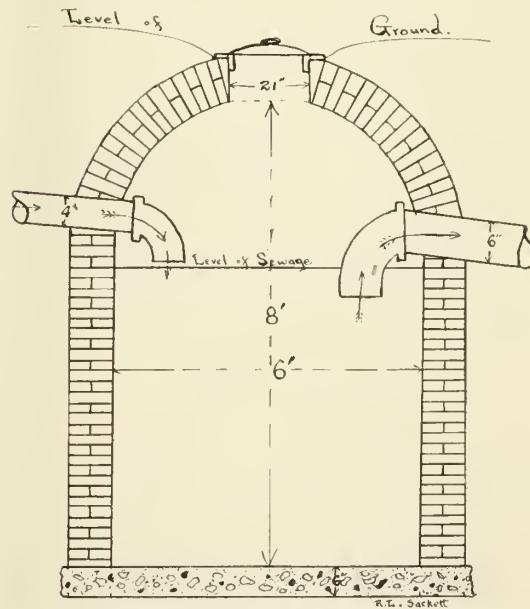


Figure 1.

Prof. R. L. Sackett has designed a very simple receptacle, which he calls a sanitary cesspool, but which is really a septic tank (Fig. 1).

With the following modifications this is a very satisfactory arrangement for the average family under average conditions: The inlet pipe should extend below the surface for three reasons: (1) That there may be no disturbance of the scum; (2) So that no air may enter the tank with the sewage, and thus interfere with the action of the anaerobic bacteria. (3) So that no gases may pass back from the tank into the house.

Also, in this tank there is no provision to insure the thorough mixing and sedimentation of the contents, but such an arrangement is readily

supplied by building overlapping partial walls as shown in Figure 2.

The outlet pipe should be lower than the inlet, and of larger caliber, and the elbow on the end of the outlet should go below the surface, so as to draw off the fluid from underneath the scum which forms there. The elbows must not be omitted or the solid parts of the sewage will be likely to pass out and destroy the usefulness of the tank.

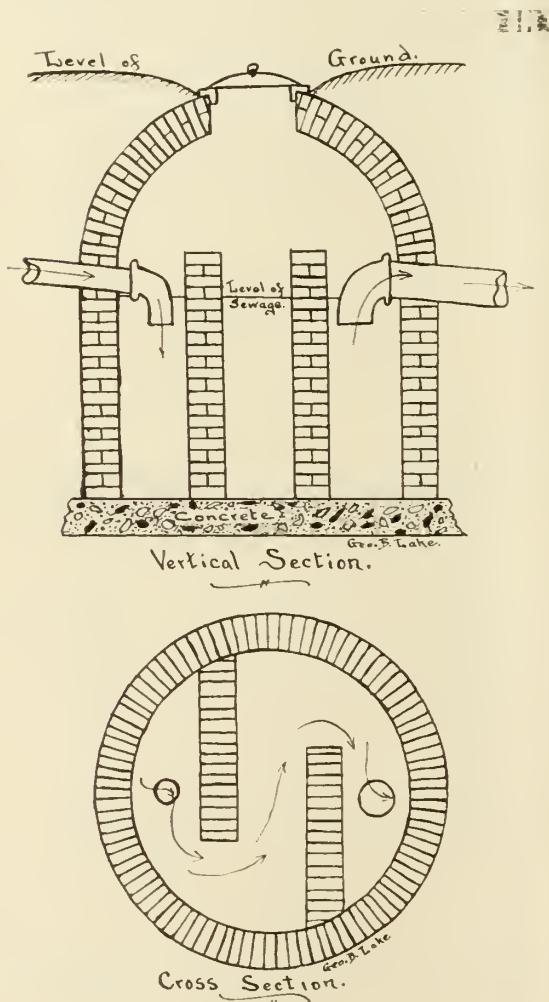


Figure 2.

The effluent pipe, of six-inch farm tile, may lead to a small creek or open ditch, or may be so placed as to irrigate a sandy or loamy field, and should be covered four feet deep to the outlet. If the cellar drainage, overflow from the cistern or other drains lead into the effluent pipe, it will be kept clean and there will be no signs of sewage at the outfall. This effluent, then, while not bacteriologically clean, is esthetically clean, and may, with safety and propriety, be emptied into any body of water which does not and is never

likely to furnish any one with a domestic supply.

In Cases 3 and 4 we again find analogous conditions, where the water receiving the sewage is used by various persons or communities for culinary and other purposes; and here we must so alter and purify the sewage that the water receiving it will remain sufficiently pure to be safely potable. The septic tank is here insufficient, for its effluent, while it may appear as clear as crystal, is still laden with innumerable bacteria, and so we must find some method which will give us a more highly purified effluent, and such a method is found in the contact filter, or bacteria bed.

The scientific development of the process of purifying sewage by the action of oxidizing bacteria dates from the experiments conducted at Lawrence, Mass., under the direction of Hiram F. Mills, though Sorby had pointed out, as early as 1883, the fact that living organisms did play a part in sewage purification. But, though the idea was first promulgated in America, its first practical application was made at Barking, England, for the London County Council, by W. J. Dibdin, the council's chemist, between May and August, 1892. This investigator determined by a long series of careful experiments that the best material for use in the contact filter was coke, and recommended the use of pieces from $\frac{1}{2}$ to 4 inches in diameter. Clowes and Houston (London, 1904) recommend the use of "walnut size coke." In smaller beds, for use in a domestic purification plant, gravel about one-half inch in diameter, may be advantageously used.

The principle upon which the contact filter operates is as follows: The bits of coke, gravel, broken stone or whatever material the filter is composed of become covered with a layer of bacteria in the form of a thin, slimy film. When sewage is turned into the bed the particles of solid organic matter which remain suspended in it adhere to the slimy film which covers the filtering material. The bacteria meanwhile proceed with their characteristic action, breaking down the dissolved organic matter into free nitrogen, ammonia and inorganic salts.

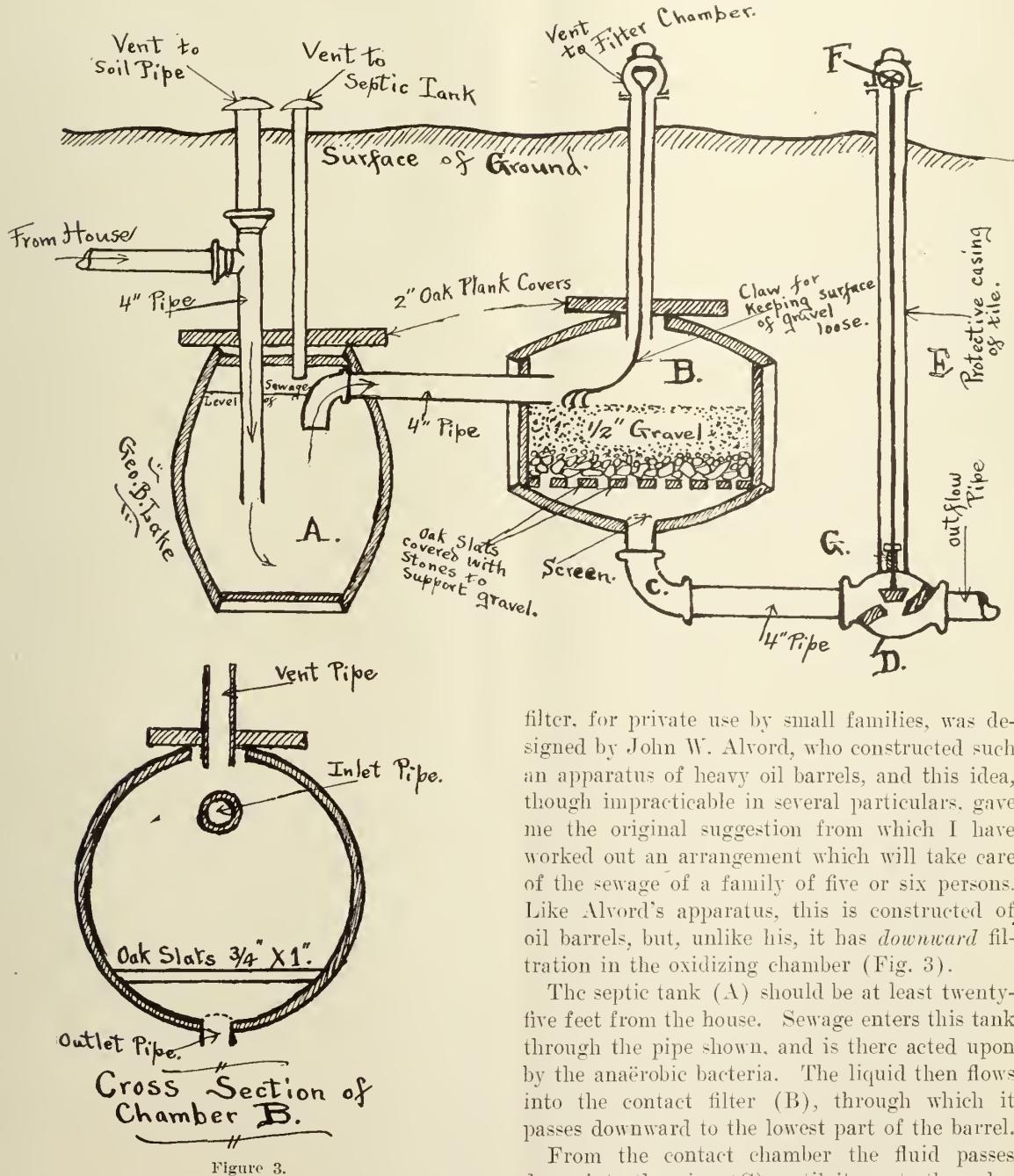
The time during which this process should go on is differently stated by different investigators. Dibdin adopted two hours as the contact period which gave the best results, and Schumburg and Bruch, in Germany, also advocate the same period. At the end of this time the sewage is drawn off from the bed, which is allowed to stand empty for two or more hours. During this period air circulates freely in the interstices of the filter, and the aerobic bacteria attack the organic particles which have adhered to the bed and re-

duce them to their elements. The soluble, inorganic salts formed in this process are dissolved and carried away by the next dose of sewage.

The distribution of fillings at regular intervals over the twenty-four hours does not appear to be a necessity. At Manchester, England, contact

Raw sewage should not be dosed over a contact filter, as it will soon cause the filter to sludge up and become foul; but the effluent from a septic tank may be used in this way to very good advantage.

A combination of the septic tank and contact



beds were operated for two months with four-, even six-hour cycles and then for three months with four cycles in ten hours, followed by fourteen hours' rest. The results were better by the second method.

filter, for private use by small families, was designed by John W. Alvord, who constructed such an apparatus of heavy oil barrels, and this idea, though impracticable in several particulars, gave me the original suggestion from which I have worked out an arrangement which will take care of the sewage of a family of five or six persons. Like Alvord's apparatus, this is constructed of oil barrels, but, unlike his, it has *downward* filtration in the oxidizing chamber (Fig. 3).

The septic tank (A) should be at least twenty-five feet from the house. Sewage enters this tank through the pipe shown, and is there acted upon by the anaerobic bacteria. The liquid then flows into the contact filter (B), through which it passes downward to the lowest part of the barrel.

From the contact chamber the fluid passes down into the pipe (C) until it meets the valve (D). Here its progress is stopped and it backs up gradually and fills the bacteria bed, where it stands in contact until the valve is opened, when it is discharged to subsurface drains or into some body of water.

The advantages of this arrangement are these: The sewage is discharged over the top of the bacteria bed, thus allowing downward filtration, and the surface of the bed is prevented from becoming packed and impervious by the claw or rake shown, which may be turned about so as to loosen up practically the whole surface of the bed.

By introducing the valve (D) in the outflow pipe the periods when the bed stands full and rests empty can be regulated to suit the circumstances. For instance, in the morning the valve (D) is closed by turning the rod (E) by means of the wheel (F). The rod, turning in the screw (G), closes the valve. During the morning the various household affairs are carried on and the bacteria bed gradually fills and stands more or less full until noon, when the valve is opened, the contents of the bed discharged and the valve again closed. During the afternoon the chamber gradually fills again, and is again discharged the last thing at night.

The gradual filling of the oxidation chamber is one of the features of this arrangement, as it permits the aeration of such parts of the bed as are not filled with the fluid. The chamber is emptied the last thing at night so as to leave it empty for eight or ten hours, and thus permit the entire bed to become thoroughly aerated.

The rod which works the valve is protected from the earth by a casing of impervious tile set on end, and this casing can be packed with straw in winter if necessary to keep the valve from freezing.

There should be no trap on the pipe between the tank and the soil pipe riser in the house, which latter should continue unobstructed and without reduction in size through the roof for the purpose of ventilation. Each fixture in the house should have its own trap arranged in the usual manner.

The plank covers should be cemented with Portland cement mortar where they join the barrels so as to make a tight joint, and the same should be done also with the joints between the pipe and the barrels.

All cast-iron pipe and fittings should be of the grade known as "extra heavy." The vent caps are of the standard pattern and are joined to straight pipe to extend to the tanks, though the joints are not shown in the drawing.

The oak strips in B are laid by hand through the hole, about six inches in diameter, cut as shown in the top side of the barrel. These oak strips are indicated in the drawing. $\frac{3}{4}$ inch by 1 inch, laid flat, but if more easily obtained there

is no objection to using a little heavier slat; but the distance between slats should not be materially increased.

On top of the slats there should be placed, by hand and carefully so as not to disturb the slats, some stones or pieces of broken bricks about two inches in diameter. This layer should be as thin as possible, as its only use is to support the gravel, approximately one-half inch in diameter, which is placed above. The stones must prevent this gravel from dropping through into the bottom of the barrel. The lower layer of gravel should also be placed by hand so as not to disturb the layer of stones. Shale or other stones that easily disintegrate should not be used for this purpose, but all of this material, stone and gravel, should be hard, rough pebbles, crushed stones, broken tile or similar material, of the size mentioned.

The drain tile should be wrapped at each joint with tarred paper and string in order to secure permanency of alignment so as to prevent the joints opening and admitting soil to the pipes and so causing them to be clogged.

In case it is necessary to arrange the tile drain with branches, standard branch connections should be used of porous tile or, if these are not available, three-inch vitrified sewer pipe connections may be used, special care being taken to have the porous tile properly centered where it joins these. The tiling should not be laid near trees, as their roots may grow into and clog the pipes.

When a very high degree of purification is necessary this apparatus should be used exactly as shown, the effluent from the bacteria bed being dosed over sandy or light loamy soil, which is underdrained to carry off the filtrate to the point of final disposal; but if this plant is properly constructed the effluent from chamber B may be conducted directly into a stream without the use of the final sand filtration.

These, then, are the methods which appear best adapted to the disposal of the sewage of individual families or small communities; and, although the question of sewage disposal in general is still, as a matter of fact, in the experimental stage, it is certain that the practical application of the suggestions hereinbefore made will result in greatly lessening the danger to life, health and happiness which arises when the various wastes resulting from the processes of life are allowed to pollute the soil upon which we live and the water which we drink and in or upon which we take our recreation.

ANESTHESIA CONSIDERED AS A SPECIALTY.*

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The increasing volume of medical knowledge, the increasing amount of preparation required by the standards of medical education and the increasing demands for a high degree of skill and for a complete equipment for the physician have led to an increased specialization in practice, and the day is past when any physician is able to drive all the departments of medical science abreast. The specialist is more easily developed in the city where positions in a college faculty serve to differentiate men. More difficulties are encountered in smaller towns where competition and sometimes jealousy lead men to consider everything as fish for their nets.

Anesthesia, than which no more precious gift was ever granted humanity, has been long in coming into the dignity it rightfully deserves, and it is only within the last few years that it has unfolded into a specialty of the highest importance. In hospitals the administration of anesthetics has been usually delegated to an interne, and in extramural cases the surgeon would turn it over to the family doctor. The task was regarded as menial and unimportant, and consequently chloroform came into disrepute by reason of the large number of deaths with incompetent and unwilling anesthetists.

That the anesthetist should be a specialist of natural aptitude as well as of practiced skill is apparent when we examine into the qualifications of a good anesthetist.

The following should obtain:

1. An overpowering love for the work as an end in itself and not as a means of learning surgery.

2. An ability to concentrate the mind on the condition of the patient and eliminate from the attention all irrelevant considerations.

3. It naturally follows that reticence and sobriety of deportment are required to maintain this eternal vigilance.

4. A critical judgment to meet the ever-recurring question as to whether he should drop the ether faster or slower. He threads a narrow strait, on one side of which looms the Sennar of too deep a narcosis with fatality to the patient, and on the other yawns the Charybdis of too shallow a narcosis which vitiates the operation.

5. A masterful personality which is needed in calming the fears of the patient. The untrained man is apt to undervalue or even overlook the effect of the mental state. It is invariably true that any suggestion which will produce conditions conducive to normal sleep will aid in effecting an uneventful anesthesia.

6. Like the surgeon, he should be cool-headed, resourceful and quick to act when danger appears. On the other hand, it is fatal for success to crown him with an overweening confidence, as his efficiency depends day by day on how extremely careful he is in every case.

The thesis that the anesthetist should rank with the surgeon as a specialist and not as an assistant needs no elaboration. An assistant is told what to do, but the anesthetist plans and executes a campaign in each case and that without any help and with nobody to share in the responsibility. Sometimes this work transcends in importance the work of the surgeon, as it may require a major anesthesia for a minor operation.

Of late we are reading of the "anesthesia peril" in the large hospitals. The custom of entrusting the anesthetic to a fresh lot of untrained internes each year, without a qualified preceptor to assist them, is responsible for a high mortality rate entirely preventable. That is a graphic refutation of the oft heard remark, "Anybody can give an anesthetic." If you are sensible of the responsibility which should rest upon the shoulders of the man who pilots a human being through this "little death within life" you surely can comprehend the danger of assigning internes to this duty in rotation, for often a man will come on who has no interest in anesthetics and will watch the surgeon instead of the patient. The high standard of work done by the Mayos is due in no small measure to the fortunate circumstance of having an anesthetist who is notably a specialist, and surgeons in Indiana who covet their success may profit by their example. On the staff of every hospital should be at least one physician giving this subject particular attention, who can be depended upon by his confrères to give their patients expert service.

You are all aware of the laxity sometimes countenanced in permitting a nurse or even a member of the family to drop the ether when extra help is needed. Seemingly innocent, it might occasionally result in a catastrophe, for any drug potent enough to produce coma is to be used with caution. Moreover, it is in reality illegally practicing medicine and altogether is a risky expedient. Editorials are appearing just

* Read before the Indiana State Medical Society at French Lick, June 18, 1908.

now in several state journals concerning the need of professional anesthetists and commenting on unnecessary deaths from anesthetics. In Great Britain even the laity have been stirred to action by the revelations at Guy's Hospital, and they are investigating deaths and locating the blame.

The purpose of this paper is to insist upon the growing need for a few young men in every city in Indiana to qualify themselves as Anesthetists, spelled with a capital A. The time has not yet arrived when this can be done exclusively, but at present the work naturally allies itself to that of the internalist, since it demands the absolute alienation from any desire for doing surgery. Certain facts deter men from entering this field and make it less attractive. Very few medical colleges embrace the subject in their curriculum and practically none give clinical instruction in it. The graduate is left to acquire this knowledge more or less disastrously after he leaves his alma mater. The work has not that eclat associated with surgery and it is much less remunerative. On the other hand, this specialty is not overcrowded and should prove attractive to any young man who likes this line of work and is willing to undergo the years of apprenticeship—years without glory and with insufficient recognition—and will submit to the discipline entailed.

A conscientious surgeon can minister unto the welfare of his patients and also unto his future reputation by selecting a man of the above-mentioned ingredients and training him until the two can work *en rapport*. The anesthetist should understand the technic of the surgeon and know what parts of the operation are most painful and when to expect them so that he may gauge the degree of narcosis. He should interrupt the surgeon with none of his worries about the condition of his patient. If he is diffident or uncertain in the use of his armamentarium or if he is an alarmist, he is nothing but a fly in the surgeon's ointment. Properly performed, his work includes a thorough preoperative examination of the patient, getting the family and personal history, effect of previous anesthetics and especially whether or not pulmonary, cardiac or renal insufficiencies exist. On the part of the surgeon, having chosen his anesthetist, he should trust him implicitly and not bother him with useless interrogatories as to "How is he doing?" The motto found on the front end of the street car should be placed at the head of the operating table, "Don't talk to the motorman." He should let the anesthetist ask when he needs any assist-

ance and not institute any artificial respiration or thoracic punchings without instructions. In brief, the two should develop the art of understanding each others' minds without recourse to time-consuming words.

While opportunity presents I might refer to a matter in general which delicacy would inhibit were it spoken other than impersonally. An anesthesia may be simple and short, as for a curettage, or it may be complicated and prolonged, as for cases of surgery of the stomach and gall cyst in very obese subjects. And since it would be patently irrational for the surgeon to get the same fee, so it is for the anesthetist to receive the same compensation for these two dissimilar operations. Often times the struggle with a subject who wavers constantly from abdominal tension to moribund flaccidity, the nerve-racking, hair-blanching effort to keep this side of danger and still have all reflexes abolished, leaves the anesthetist mentally and physically more exhausted than the surgeon, and he should be paid in proportion to this responsibility. It has been proposed that the anesthetist receive 10 per cent. of the total fee, and such a ratio would be eminently satisfactory and no less just. I trust the time is coming when a patient will not only choose his anesthetist, but will pay him a specific fee as he now does the surgeon.

This subject is claiming more attention at present than has hitherto been accorded it. The immense amount of experimentation lately is a healthy sign. No matter if the complicated piece of gas-ether apparatus hailed as the final solution is impracticable; no matter if we do not all agree with Brother Abbott, that HMC is the *ne plus ultra* of anesthetics; the real lesson is that we are not content, and while a beneficent Deity may never allow us to find a perfect anesthetic, lest we misuse the boon, yet we will not be satisfied short of the very best we can discover.

The gist of the matter is embodied in the following injunctions:

1. To the anesthetist, to be truly a specialist and dignify your calling by your loyalty to its interests.
2. To the surgeon, to promote the success of surgery by employing skilled anesthetists who give extra time and attention to this subject.
3. To each individual physician, to pursue an honorable course in selecting only anesthetists who by innate ability and special training are fitted to give your patients the best service and the best chance to survive surgical ordeals.

SOME OCULAR MANIFESTATIONS IN GENERAL DISEASES.*

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Organic diseases of the nervous system as suggested by Swanzy may be divided into focal or diffuse.

The ophthalmologist usually considers focal brain diseases, first, in relation to the increase or diminution of intracranial pressure. Tumors, aneurysms, cysts and abscesses are usually characterized by increased pressure, while hemorrhages and softening are not so characterized. The hemorrhage which is sufficiently large to produce ocular symptoms from continuous high pressure is almost certain to produce a fatal result before such symptoms occur.

Double optic neuritis or choked disc, while not regarded as pathognomonic, is considered a very valuable sign of increased intracranial pressure, and is found in about 80 per cent. of cerebral tumors. It is usually an early symptom. The choked disc is not often of diagnostic value in localizing the lesion, but simply of establishing the diagnosis of a brain tumor.

A number of attacks of temporary complete blindness is another general ocular symptom which indicates merely the presence and not the location of an intracranial tumor. The condition may be associated with a normal fundus, accommodation and visual field. The attack may recur several times daily and is probably due to some disturbance of the cerebral circulation or sudden increase of the cerebrospinal fluid when the functions of the visual centers, tracts or optic commissure are affected. Since transient blindness occurs in several other conditions, it can not be considered a pathognomonic symptom of cerebral tumor. As a symptom it is of less importance than the choked disc.

Focal brain diseases not characterized by increased intracranial pressure are usually attended by direct localizing symptoms which indicate the seat of the lesion. Localizing ocular symptoms are shown by disturbance of vision or derangement of the oculomotor apparatus. Lesions affecting the occipital lobe produce the ocular manifestations of hemianopsia, visual hallucinations, mind blindness, color blindness, etc.

Lesions of the primary optic ganglia and tracts are usually followed by hemianopsia associated with general symptoms due to pressure.

Owing to the liability to implication of the trunks of the cranial nerves in lesions at the base of the brain, the orbital muscles often show signs of paralysis.

Any morbid condition of the cerebral cortex affecting the ocular muscles produces a derangement of the conjugate movements of the eyeballs and not of isolated muscles. Nuclear ocular palsy, or ophthalmoplegia, is the result of primary disease of the orbital nerve nucleus in the central gray matter of the aqueduct of Sylvius and floor of the fourth ventricle. Primary nuclear paralysis may affect either the external or internal muscles of the eyeball.

Diffuse Diseases of the Brain.—The eye symptoms of disseminated sclerosis of the cerebrospinal system consist in certain visual defects, ophthalmoscopic appearances and oculomotor disturbances. The characteristic visual defect is a rapid onset of an amblyopia with a central color scotoma. The ophthalmoscopic appearance in connection with these visual defects may be absolutely normal. Diseased ophthalmoscopic appearances are found in about 50 per cent. of cases of disseminated sclerosis. It usually consists of an atrophic appearance of a part or the whole surface of the optic papillæ. The oculomotor derangement consists of isolated paralysis of the orbital muscles and nystagmus. Nystagmus is present in about 50 per cent. of the cases of disseminated sclerosis. Since it is not a common symptom in other diseases of the nervous system, its presence is of considerable diagnostic value.

Meningitis in its various forms is apt to have associated with it optic neuritis, ocular paralysis and defects in the visual field.

Tubercles are found in the choroid in about 15 per cent. of cases of acute tubercular meningitis. Retinal apoplexy in persons of advanced life should be taken as an indication of degenerative change in the coats of the retinal vessels, and is often a forerunner of hemiplegia. The ophthalmoscope often reveals sclerotic changes in the retinal arteries before the generalized arterial sclerosis can be detected by a general examination.

Tabes dorsalis may present the following eye symptoms: atrophy of the optic nerve, paralysis of orbital muscles, pupillary alterations and paralysis of accommodation. Optic atrophy occurs in about 20 per cent. of cases and usually appears in the preataxic period. It may precede all symptoms by a considerable period of time. Paralysis of orbital muscles is found in about 30 per cent. of cases of tabes, and also more fre-

* Read before the Indiana State Medical Society at French Lick, June 18, 1908.

quently appears in the preataxic stage and even as an initial symptom.

The contracted pupil in tabes is thought to be due to disease of the ciliospinal center in the lower cervical and upper dorsal region, or at the origin of pupil, dilating fibers in front of the aqueduct of Sylvius. The Argyll-Robertson pupil is an early valuable sign of tabes. However, this pupil may be found in other nervous conditions, as general paralysis, but most writers regard it as a very early premonitory symptom of serious general nervous degenerative disease, usually tabes.

The diseases of the eye depending upon the pathologic changes in the blood and circulatory system are important subjects for the physician. Simple anemia is best diagnosed by an examination of the conjunctiva. The effect on the retina is rather uncertain. However, every physician should remember that hemorrhage from the stomach, bowels, or uterus threatens incurable blindness. About 50 per cent. of reported cases show no improvement, as optic atrophy usually follows. Similar conditions sometimes result from quinin toxemias. The ophthalmoscope shows marked pallor of the disc, associated with contraction of the vessels. As a rule, the impairment of vision is transitory, but may be followed by optic atrophy. Embolism of the central artery of the retina or one of its branches may occur in connection with valvular heart disease, arterial sclerosis, aneurysm of aorta, or Bright's disease.

In all forms of long standing or severe types of renal disease, the vessels of the retina may show changes in common with those found elsewhere. The degeneration may lead to retinal extravasation or distinct change in the retina. Frequently with the high-tension pulse the retinal arteries are found contracted independently of any form of optic neuritis. The walls of the arteries in chronic Bright's disease often show a uniform thickening, due to the development of hyaline tissue in the middle coat producing the appearance of silver wire arteries. Hemorrhages form a conspicuous feature of most cases of retinal disease in albuminuria. Both eyes are almost universally affected. Retinal disease shows itself through slight opacity and edematous swelling of the retina, characteristic white spots of an inflammatory or degenerative character, hemorrhages, papillitis, and finally atrophy.

The etiology is thought to be largely the altered condition of the blood. However, the increased arterial tension and degeneration of the arteries are causal factors which must be consid-

ered as of more or less importance. Renal retinitis must be considered as a very grave indication, and usually signifies an early fatal termination of the disease. However, retinal disease as a complication of pregnancy should be remembered as an exception. This form often shows a marked improvement after the termination of gestation.

Uremic amaurosis is one of the cerebral symptoms of the toxic nature of Bright's disease. The onset is usually sudden and bilateral. Complete sight is regained inside of twenty-four hours under successful eliminative treatment. The ophthalmoscopic examination, as a rule, reveals nothing abnormal.

Ocular lesions in diabetes are variable.

They may appear either as a weakness of accommodation or convergence, or as an inflammatory or degenerative process. The frequent development of cataract is usually thought to be due to disease of the vessels, particularly of the ciliary processes, and to the resulting disturbance of nutrition of the lens. However, the etiology has been attributed to the removal of fluid from the lens through the medium of the sugar, to the development of lactic acid in the aqueous humor, and to toxic substances circulating in the blood apart from the sugar. Diabetic retinitis is a rare characteristic condition.

Rheumatism frequently is an etiological factor in iritis. Rheumatic iritis is usually of the plastic variety, either with or without coincident rheumatic affections. The two eyes are not usually symmetrically affected and show a distinct tendency for relapses. Some authors regard it as the most common cause. Rheumatism is sometimes the casual factor of ocular palsies through disease of the nerve trunk. The fibrous tissue of the eye is frequently affected by chronic rheumatism in the form of scleritis and episcleritis. Gouty conditions may influence or induce catarrhal inflammation of the conjunctiva similar to that which occurs from ametropia. It is at times considered a predisposing factor in glaucoma, scleritis, iritis, retinitis and palsies of the ocular muscles.

All acute infectious diseases may be attended by an acute febrile stage of hyperemia of the conjunctiva or photophobia, due to meningeal irritation. Ocular lesions present themselves at the commencement of an attack of measles, and are usually among the earliest symptoms, consisting of a well-marked conjunctival catarrh with decided photophobia. After the general disease has subsided, a number of strumous eye affections often are present; usually catarrhal and phlyctenular ophthalmia, superficial keratitis, or marginal blepharitis. Rarer complications are

found in paresis of accommodation and lesions of optic nerve and centers.

The diphtheritic infection may attack the conjunctiva or cornea directly, but usually is shown as a postdiphtheritic paresis, or at times a paralysis of the intra- or extra-ocular muscles. Paralysis of accommodation is the most frequent form and usually develops rapidly at the end of a period from three to six weeks after the commencement of the throat affection.

It is usually bilateral, and the severity bears no definite relation to that of the original infection. Complete recovery is the rule, although several weeks or months are required for convalescence.

As regards the actual site of the lesion, most authorities accept the theory which places it in the nerve endings of the affected muscles.

Influenza usually presents some inflammatory ocular symptoms in the early stages, such as conjunctivitis, inflammation of Tenon's capsule, etc. Later rare complications are found in a paresis of accommodation and the extraocular muscles, and the occurrence of papillitis or retrobulbar neuritis, producing the characteristic symptoms followed by a diminution of vision and the field, including scotomata. The uveal tract is seldom affected in influenza.

In smallpox the conjunctiva is commonly affected in the early stages, as in the other febrile diseases, but the serious ocular lesions of variola occur in the later stage. These serious lesions occur in from 5 to 11 per cent. of cases as published by different observers. A large per cent. of the eyes are permanently blinded, usually from corneal ulceration. The uveal tract is occasionally affected in the latter stages of the disease. The pustules frequently affect the edges of the lids, producing entropion, etc., from the subsequent cicatrization.

In conclusion, it should be said that syphilis probably heads the list of general diseases which bear an etiological relation to ocular affections. The protean character of the disease is well shown in the ocular conditions. The primary sore may appear on the lids or conjunctiva, usually of a characteristic appearance with an involvement of the preauricular glands. No part of the eye or adjacent structure is spared during the further course of syphilis, except the lens, which is only involved secondarily. Lues is manifested either by inflammation of any part of the visual organ, chiefly of the uveal tract, retina and nerves, or by specific new formations.

Syphilis is the usual predisposing cause of iritis. Various authors give the percentage from 60 to 80, and most frequently met with between

the twentieth and fortieth year. From 15 to 20 per cent. of cases appear in the diagnostic form of condyloma or gumma.

The condyloma is more frequently found below and in the vicinity of the pupil. It usually disappears under treatment, but leaves a broad, dark synechia and an atrophic section of the iris. It is a late secondary complication. The gumma is larger and appears later, usually associated with severe inflammatory changes in the other parts of the uvea. Lues may affect the ciliary body and choroid in every possible degree of violence and duration. In the mild form chorioiditis occurs in the ordinary disseminated variety with slight disturbance of vision. Fleoculi in the vitreous associated with disseminated chorioiditis are very suggestive of syphilis. More frequently the choroidal attacks are severe and are complicated by numerous dense vitreous opacities. In the severe forms the process is usually diffuse in character and the retina is also involved in the inflammatory process; hence the chorioretinitis. At the beginning, the clinical symptoms are usually insignificant and are of a general character, such as seeing sparks, floating spots, etc., due to the irritation of the outer layers of the retina by the diseased choroid.

Diffuse interstitial keratitis, so frequent and characteristic in congenital syphilis, is a rare late affection of the acquired variety. Syphilitic disease may also appear in the orbit and its bony walls leading to ulceration and necrosis.

The tear passages are often attacked in the form of dacryocystitis, and usually extends from the mucous membrane. The bony walls of the lachrymonasal canal are not infrequently involved. This often results in cicatricial or even bony occlusion.

Eye symptoms are very common in cerebral syphilis. Central and peripheral affections of the optic nerve are very frequent tokens of lues. They are usually secondary as a neuritis in connection with retinal or uveal disease. With each infection of the optic nerve the vision is more or less permanently impaired.

Syphilitic paralyses may be due to various causes. The muscle itself may be diseased; specific inflammation in the orbit may affect the nerve or muscle; neoplasm at the base may compress the basilar nerves; growths within the brain may injure the motor nerve roots or nuclei. These paralyses are usually combined with other evidences of syphilis. On the whole, luetic paralyses of the eye muscles are found in the later stages, rarely in the first six months. Since about 50 per cent. of ocular paralyses are syphilitic in origin, every spontaneous ocular paralysis

or ophthalmoplegia necessitates a differential diagnosis with regard to lues.

Congenital syphilis differs from acquired forms in many respects. Diseases of the eye are not infrequently of intrauterine origin. They include affections of the uvea, from simple chorioiditis disseminata with hardly noticeable impairment of vision to the most severe plastic form of iritis with occlusion of the pupil and its results.

Extrauterine diseases are also observed in congenital syphilis. They include chorioiditis, from the mildest to the severest types, iritis, retinitis, etc. Diffuse interstitial keratitis is very characteristic of congenital lues, and begins before puberty. The complication occurs in from 60 to 70 per cent. of cases; consequently its presence always arouses a suspicion of that cause.

Diffuse interstitial keratitis may be the sole symptom of hereditary syphilis; more frequently there are other evidences of syphilis, such as deformities of the skull, deafness, notched teeth, etc.

The outcome in this condition is often much more favorable than expected. Especially is this notable when it is remembered that antisyphilitic treatment in this condition is often disappointing and may be even detrimental by lowering the nutritive functions of the patient.

DISCUSSION.

Dr. F. C. Heath, of Indianapolis: The occurrence of optic neuritis and paralysis of one or more of the eye muscles in connection with brain lesions has long been known. They are of use in confirming diagnosis and to some extent in localizing lesions.

Infectious diseases produce various lesions in the eye. Of these the most frequent are conjunctivitis in measles, keratitis in smallpox, paralysis of accommodation in diphtheria, iritis in syphilis and rheumatism, with a great variety of lesions in influenza, syphilis and tuberculosis.

Among the lesions of special interest to general practitioners are those found with diseases producing alterations in the blood like diabetes and Bright's disease. In the former we have cataract, iritis, keratitis, retinitis, optic atrophy, amblyopia of muscles and altered refraction. The distinctive eye lesion of albuminuria is retinitis or neuroretinitis, characterized by swollen nerve, flame-shaped hemorrhages and white spots, the latter frequently arranged in star-shaped figures at the macula. This retinitis is of prognostic signification, but few patients live for two years after its discovery, and the majority die inside of a year.

SPECIAL ARTICLES

A YEAR OF PREVENTIVE MEDICINE.

J. N. HURTY, M.D.

Secretary of the Indiana State Board of Health.

INDIANAPOLIS.

It would be impossible to express in definite terms the progress which preventive medicine has made in Indiana in the last year. But it certainly has advanced, and it is certain that, whatever the advancement is, the same is almost entirely the result of the efforts of the medical profession. Occasionally a licensed doctor is found who grumbles, holds back or perhaps opposes disease prevention, but such is a weak brother, deserving pity, not censure.

The average number of deaths annually from diphtheria for the last eight years was 440. The year 1908 closed with 343, a decrease of 97, or 22 per cent. This improvement is fairly attributable to the now frequent application of the cultural method of making diagnosis and the increased use of antitoxin. The free antitoxin law, which was secured in 1907 through the efforts of J. F. Simison, M.D., representative from Tippecanoe and Montgomery Counties, has saved many lives. This law provides that any physician may, at any time, by simply filling out a blank, procurable from any health officer, secure any amount of antitoxin at the expense of the public for persons too poor to pay for it. The records show that 714 poor patients were treated with free antitoxin in 1908. The diphtheria mortality for the last nine years was as follows: Deaths in 1900, 745; 1901, 554; 1902, 424; 1903, 462; 1904, 314; 1905, 366; 1906, 402; 1907, 353; 1908, 343; annual average, 440. The decrease in 1908 as compared with 1900 was 402, or 53.9 per cent. That a corresponding decrease in morbidity occurred is not likely, but there was a good decrease, probably not less than 20 per cent. This was, of course, due to precautions heretofore not taken. Most school teachers now know that diphtheria may exist in mild form, and if all sore throats are looked upon with suspicion the first step in prevention is taken. The health circulars of the State Board of Health have done much toward spreading preventive information and are widely circulated.

The decrease in scarlet fever mortality can not be attributed to antitoxin treatment. This decrease is shown by the following figures: In 1900 scarlet fever deaths numbered 141; 1901, 149; 1902, 150; 1903, 166; 1904, 192; 1905, 133; 1906, 101; 1907, 91; 1908, 97; average,

135. Comparing the 97 deaths in 1908, there is a decrease of 38, or 28 per cent. As with diphtheria, it is now generally known that mild cases of scarlet fever are to be greatly feared as spreaders. Corresponding precautions are therefore taken.

Diarrheal diseases show a decrease as a cause of death; yet it is rather startling to know that 1,600 to 1,700 children under 5 years of age die annually in Indiana from such causes. However, it is a not inconsiderable fall from 2,049 diarrheal deaths in 1900 to 1,514 in 1908. This is a decrease of 235, or 11 per cent. The average for the nine years was 1,620, and by this comparison the decrease in 1908 was only 106, or 6.5 per cent. The better care of children with special regard to diet would reduce diarrheal diseases, and when this occurs it will be evidence of an advance in general intelligence.

Typhoid fever, like the other diseases mentioned, is on the decrease; but it is still a disgrace to the state. For, when we remember, in order to have typhoid, it is necessary in some way to eat or drink human excreta, then the nastiness and sin of it is plain. From 1,440 typhoid deaths in 1900 to 913 in 1908 is an improvement. This decrease of 527 deaths is a betterment of 36 per cent. By comparison with the average, the following condition appears: Average annual typhoid deaths, 996; deaths in 1908, 913; decrease 83, or 9 per cent. Like tuberculosis, typhoid fever claims its toll from the prime of life. Of the total (913) in 1908, those in the age period of 15 to 50 numbered 669, or 73 per cent.

Smallpox, as it is so easy to control, hardly deserves mention. Yet it has done much damage to business if not to life. The total deaths were 34 and the number of cases reported 1,603. This was not half, as we have a right to conclude from the fact that for every recognized case a number of unrecognized cases exist. Two questions always arise when smallpox is considered. The first is: Why do so many doctors miss diagnosing so many cases, and why do the people refuse vaccination when its efficacy is so overwhelmingly proven?

Tuberculosis is slowly decreasing, as appears from the mortality figures. The total deaths in 1900 were 4,754, and in 1908 4,514, or 240 fewer, a decrease of 5 per cent. This would indicate that the continued combat against the disease was not without effect.

The fall in the death rates as given for the above infectious diseases was attended by a corresponding fall in case rates. The reports of cases being so imperfect at this time, no definite

figures can be given, but if we estimate on the average twenty cases of sickness for each death, then the 1,539 fewer deaths in 1908 represent 30,780 fewer cases of sickness.

It certainly would not be unreasonable to claim that the State Board of Health laboratories were factors in bringing about this decrease. The number of bacteriological and pathological examinations made in the interests of preventive medicine during the year was 5,780. The aid given through these examinations in the way of early and correct diagnosis, with consequently more successful treatment, can not be told.

In the food and drug laboratory of the State Board of Health over 3,000 samples of food products have been collected and analyzed. The percentage of adulteration found was 16 per cent. In 1907 the percentage of adulteration was 20.8 per cent: in 1906, 42.3 per cent. The improved sanitation of food-producing establishments, groceries, dairies, butcher shops and slaughterhouses, brought about by the State Board of Health through its inspectors while making food inspections, has certainly had an effect in bettering the public health. A further betterment must have resulted from the 621 water analyses made in the chemical laboratory of the board. Of this number 69 per cent. were found to be polluted and were condemned. This removal of 328 possible sources of sickness must have been helpful.

The 1,539 fewer deaths from the five diseases mentioned as compared with the average number of deaths from the same diseases, in the last nine years, represent a saving of life, an increase in happiness and a saving of money. The 30,780 fewer cases of sickness also represent increased happiness, increased strength and a large saving of money. To secure a pecuniary expression, let each life saved be considered as worth \$1,000. The statutory value of a life is \$10,000, and the court value, as determined from numerous decisions, is \$5,000. But taking \$1,000, the saving in lives was \$1,539,000. To this must be added the saving from the corresponding decreased sickness. Estimating each case of sickness as costing \$10, and this includes medicine, doctors' fees, loss of time from work, nursing and all other sickness expenses, then the 30,780 fewer cases of sickness represent a saving of \$307,800, which, added to the other sum, makes \$1,846,000.

In accounting for any improvement in the public health, the good work and influence of the newspapers in propagating the principles and applications of preventive medicine should not be forgotten.

THE WORK OF THE STATE MEDICAL ASSOCIATION.

GEORGE D. KAHLO, M.D.

President of the Indiana State Medical Association. Professor of Clinical Medicine, Indiana University.

FRENCH LICK, IND.

THE JOURNAL.

Whatever view we may have entertained a year ago as to the advisability of establishing a journal of the State Medical Association to take the place of the annual volume of Transactions, the opinion is now practically unanimous that the Council acted wisely in its decision. The reason for this change of sentiment is simply that THE JOURNAL has been a success, and we have reason not only to felicitate ourselves in its possession, but to congratulate the editor and those to whom should belong the special credit of making it what it is. Those who are familiar with the publications of other state associations will, I think, agree with me in the statement that its excellence is only the more apparent by comparison. The real value of THE JOURNAL is that it acquaints us with subjects of current medical interest among our associates; we know what is being done in the county and district societies, as well as the state association, and it keeps us in touch with one another.

Under the old régime, the chief function of the State Association was to afford an opportunity for getting together once a year at our regular meeting and it was annually resurrected for this purpose, but little could be accomplished as an organization in the interim. Now that we have such a means of communication, there is no reason why the Association should not be continuously active in the fulfillment of the much broader purposes for which it was organized, namely, an improvement in our facilities for medical teaching, the enactment and enforcement of just medical laws, the enlightenment of public opinion to an intelligent appreciation of what scientific medicine really means, and to the promotion of a more friendly intercourse with one another.

MEANS FOR STRENGTHENING THE ORGANIZATION.

With such laudable purposes in view, besides affording, as it does, such material advantages to its individual members, it is surprising, indeed, that every physician who is eligible to membership has not availed himself of the privilege. In some few counties in our state this is already the case, but in a still larger number it would seem that properly directed efforts might result in a much better showing than has as yet been made.

Just how these results can be best accomplished will depend much upon local conditions. Fundamental to their attainment there must be concerted an energetic effort having as a basis a list of all physicians practicing within the prescribed territory who would be eligible, and then a personal appeal to each one setting forth the advantages accruing from such membership both to the individual and to the cause of scientific medicine. Every county society should have a membership committee whose special duty it should be to look after this work. There is enough for the officers to do in connection with the scientific work of the society. In the more populous communities it would be well to divide the territory into small districts with a committee of sufficient size that every physician might be personally interviewed by one or more of its members. Doubtless in many counties this or an equally systematic method has already been pursued, and yet there still remain many worthy practitioners who have for one reason or another failed to make application for membership.

POSTGRADUATE COURSES.

A question that naturally suggests itself in this connection is, Are there any material advantages that might be offered to the individual which we are not now offering and which other associations already afford? One of these, and one of the great advantages in stimulating interest in the scientific work of the society, is the so-called postgraduate course as outlined by the American Medical Association, which has proven so successful in many counties where it has been tried. The plan as outlined covers a period of four years and embraces a very comprehensive course of a most practical character. Sixteen counties in our own state association have already adopted this course, and all who have participated in the work speak in enthusiastic terms of what is being accomplished. In the larger communities opportunity is afforded for making clinical demonstrations and introducing pathological specimens illustrative of the conditions under discussion, thus adding much for the interest of the subject. The carrying out of such a program does not entail as much work upon the individual members as the preparation of formal papers and is likely to be much more instructive.

MEDICAL DEFENSE.

Another, and what appeals to me to be a very material advantage which might be offered as an inducement for membership, is a cooperative defense against malpractice suits. Such a plan is

already in effect in the states of New York, Pennsylvania, Maryland, Illinois, Iowa, Wisconsin, Missouri, Kentucky, Nebraska and Massachusetts and is under consideration in Minnesota, Virginia, New Jersey, Michigan, New Hampshire, California, Ohio and several other states. The plan adopted by the different state associations differs slightly in minor details, chiefly as regards its administration, but is practically the same in all of its essential features. Briefly, it provides for the setting aside of one dollar in dues paid to the association as a fund for medical defense, and the society undertakes to defend its members against suits of this character, but not to pay damages. The practical results of the operation of this plan in states where it has been tried have been, first, an immediate and marked increase in membership; second, a more prompt payment of dues, and, third, a decided reduction in the number of these suits. Contrary to what might be expected also, it has been found that malpractice suits were more frequently brought against country practitioners than those in the city, and the same is true as regards such actions against general practitioners as compared with specialists. Experience has further demonstrated that "valuable as has been the influence of the association in the actual trial of cases, it has been of even greater value in checking the number of suits brought, especially in the country districts where the injury to the reputation and practice of a physician is apt to be greater than that which results to the city practitioner." So much am I impressed with the value of this feature that it is my intention to recommend its adoption at the next meeting of the House of Delegates.

AN ASSOCIATION OF COUNTY SECRETARIES.

Still another plan for rendering effective the work of the association, particularly as it pertains to its individual units, is by the organization of an auxiliary society among the secretaries of the county associations who could meet and discuss plans of organization and means for stimulating interest in the local and district meetings. I shall hope to effect such an organization at our next annual meeting, arranging the time of meeting so that it will be concurrent with that of the House of Delegates and not interfere with the regular scientific work of the society.

MEETINGS OF THE HOUSE OF DELEGATES.

The Council has, I believe, acted wisely in giving its approval to the calling of a special meeting of the House of Delegates for the evening previous to the regular meeting so that such con-

flict shall not occur, and I sincerely hope that this body may see fit to so amend the by-laws as to make this a permanent arrangement. There are many questions of importance relative to the executive affairs of the association and to the reports of standing committees that should be freely discussed so that they may receive the serious consideration of the delegates present. When the two meetings occur at the same time it not only interferes with the scientific program, but the hurry to get through with the meeting of the House of Delegates seriously hampers the work of this body. Hereafter the reports of the committees will be published in *THE JOURNAL* the month preceding the annual meeting so that delegates may have ample time and opportunity for their perusal, and unnecessary time not be consumed in their reading. I have asked the chairmen of these committees to include in their reports specific recommendations bearing upon the subject under discussion as it may relate to the work of the State Association at the time, so that the House of Delegates may have something definite upon which to act.

SCIENTIFIC PROGRAM.

The Committee on Scientific Program, at my suggestion, as also by the approval of the Council, will at the next meeting exercise its proper prerogative in limiting the number of papers so as to permit of a fuller discussion than has been possible at most of our recent meetings. It will not be required that papers should first be read before a county society nor that they be referred by such organization, as has heretofore been the case, but to be accepted by the committee, typewritten copies, together with a synopsis of not less than fifty nor more than one hundred words, must be in the hands of the State Secretary by July 1. An effort will be made to provide symposia upon subjects of interest to both physicians and surgeons which will be presented before the general sessions. These efforts are being ably seconded by the Committee of Arrangements, which has in contemplation the providing of a very attractive social program, so that there is every prospect of an unusually enjoyable and instructive meeting, particularly as the date this year occurs at a season in which it will be possible for most physicians to attend.

MEDICAL LEGISLATION.

A subject that is, perhaps, a little nearer to the thoughts of members of our Association at the present time than the arrangements for our next meeting is. What measures are likely to be presented before the legislature now in session that

are of medical interest and what action will probably be taken with reference to those previously introduced?

THE MEDICAL SCHOOL.

A bill in which we should all feel an interest and which has already been presented is an enabling act granting authority to Indiana University to conduct a four-year course of medicine in Indianapolis. Happily we are in complete agreement upon this subject, as that great incentive for diversified interest and factional alignment which heretofore has resulted from the competition of rival medical colleges no longer exists. It is quite unlikely, therefore, that there should arise any formidable opposition to the plan proposed from any source, so that there is every prospect that the University will be granted the necessary authority, but to carry on the work undertaken in a manner commensurate with our ideals of modern medical teaching and in keeping with the dignity of a great school of learning, an appropriation will later be necessary, and we should, both as a society and as individuals, exert our influence to unify the sentiment that it is *our* medical school and deserving of our fullest support.

OTHER MEASURES.

Other subjects which may come up for the legislative consideration are questions of amendments to the law governing the examination and licensing of physicians and possibly also a reorganization and consolidation of existing public health agencies into one department as has been advocated in connection with the federal government. That much might be gained in the administration of these departments by placing them under one responsible head is, I think, generally conceded, but it is a debatable question whether such an effort at the present time might not be fraught with some risk in the possible loss of things already gained. The building and equipment of institutions for the care of the tubercular and epileptic are measures already authorized, and it is fair to assume will receive due consideration at the hands of the members of the Assembly without our intervention, but, if necessary, should receive our cordial assistance. The great difficulty in obtaining proper medical legislation is usually that we are not agreed among ourselves as to what is needed. Whenever we can come before a legislature as a united profession and can demonstrate that what we ask is really desirable and in the interest of the public good, we shall have little difficulty in obtaining it. Let us not jeopardize our chances by asking too much and then concentrate our efforts upon that

which is most urgent. We were never in a position to do these things so well as we are now.

I shall gladly receive any suggestions looking to the promotion of the Association's welfare and will later take occasion to report to you such progress as may have been made along the lines here indicated.

THE INDIANA STATE BOARD OF MEDICAL REGISTRATION AND EXAMINATION AND THE MEDICAL LAW.

W. A. SPURGEON, M.D.

President of the Indiana State Board of Medical Registration and Examination.
MUNCIE, IND.

Editor of THE JOURNAL:—Thanking you for your kind invitation to say something in THE JOURNAL concerning the work of the Board and the operation of the Medical Law in Indiana, I will endeavor to comply with your suggestion.

The Indiana Medical Practice Act is not perfect. No statutory enactment, on any question, by any state or nation, is perfect. The work of the State Board of Medical Registration and Examination has been limited by the provisions of the law, and by adverse conditions of long standing in the state. Indiana was practically without medical legislation until twelve years ago. Surrounding states were provided with stringent legislation. Quacks, charlatans, seamps, vampires and ignorant pretenders fled toward the point of least resistance and located in Indiana. Diploma mills dumped their product into Indiana. Nor were we wholly dependent upon outside sources for supply. The plumber could throw down his wrench, the brick mason his trowel, the ditcher his spade, the bartender his apron and take up medicine in a day. The honest, educated physicians of the state were disgusted, and it was but little credit to be called a doctor in Indiana. Many of the best men of the profession sought to protect their reputation by refusing to associate with other physicians, and often the good suffered with the bad, for there was no adequate test of qualification, moral or professional. This was the fruitful source of professional bickerings and discord. This is but a suggestive hint at conditions when the law became effective in 1897.

While the medical laws of all the states are imperfect, yet they are good and ours is among the best. Any attempt to materially change it now would be hazardous.

The work of the Board is limited mainly because no appropriation of money was ever made

to carry out its provisions. The law does not cost the state a dollar, except for a little printing and office furnishings. The expenses have been borne by the medical profession. The members of the Board have been compelled to pay part of the running expenses out of their own private funds.

The law is also weak in that it does not provide adequate penalties for violations. This latter part requires discretion by the Board and other friends of honorable medicine, lest an unsuccessful prosecution or an inadequate fine result in advertising advantages to the offender rather than punishment and prohibition of offenses.

In this connection it should not be forgotten that the *penal features* are of minor importance compared to the *educational provisions* of the law. This is the *strength* of the Indiana law. In this it excels most other medical laws, and from this has come an immense good to the people of the state and benefit to the profession. For instance, the New York law and the laws of some other states specifically indicate the standard of both the medical and preliminary educational qualifications which the Board shall require, while the Indiana law requires its Board to fix from time to time a minimum standard equal to the average standard of surrounding states and confers a discretionary privilege on the Board of advancing the standard beyond this and as rapidly as possible.

Believing that the redemption of the state from the curse of incompetency could best be accomplished through enforced high educational standards, the first work attempted by the Board, after the registration of those legally entitled thereto, was to establish and enforce a standard of medical education that would place not only the colleges but the coming doctor above reproach. This standard has been advanced each year. The colleges of the state have promptly met it or quit business. The standard, both preliminary and medical, has been raised until at this time we are abreast the best states in America. Having this work well under way, the law permitted *another* step of great importance to the profession.

Exercising a discretionary right, conferred by the law, the Indiana Board formulated a constitution and by-laws, called the Boards of other states together in the city of Chicago and effected the organization of the American Confederation of Reciprocating Boards, which has since worked out the problem of interstate reciprocity in medical licensure. When this was undertaken

there were but two other states—Michigan and Wisconsin—willing to cooperate. If the Indiana law did not provide for this, it permitted it, and the Board accomplished it after repeated attempts by other states. It would not, therefore, be claiming too much for the Indiana law to say that it has given us professional freedom, so that a licentiate of Indiana can go to any state in the Union and practice where the best physicians of any other state may go. There are a few “health resort” states and two or three with antiquated laws that do not reciprocate. An Indiana license is good for exchange or endorsement in the best states in the Union. Until this was accomplished even the best men of the state were professional prisoners, confined to their own state. Indiana now stands at the head of the list in reciprocity rights and privileges. The educated profession and the laity of the state may well be proud of the high standing of the medical profession of Indiana, secured by the law in a few years.

While some quacks and scamps are still attempting to violate the law and a few incompetents yet darken the field—some defiantly, some clandestinely, and some under the shield of the religious liberty cloak—yet the medical law is better enforced and more effective and is accomplishing more for the people of the state than many other laws administered at great expense. While Indiana, a few years ago, was the paradise of quacks and charlatans, and any one without let or hindrance could begin the practice of medicine, under the law nearly five hundred were driven out of the state or have been compelled to quit practice. Every “diploma mill” in the state has been completely suppressed. The Board, in conjunction with similar Boards in other states, has suppressed many diploma mills *outside* the state that would have continued but for the Indiana law. The better colleges of the state, by combination and faithful endeavor, have been greatly strengthened and improved. The standard of medical education has been elevated until it now means something to hold legal authority to practice medicine in Indiana and will mean much more in the future than now.

There are more than six thousand physicians in the state who have willingly contributed in valuable time and money to the elevation of the profession to the high plane of honorable medicine that it now occupies. To these it would be an esteemed privilege to give in greater detail the work of the Board in its endeavor to enforce the law. This will require another article and possibly several, as space in THE JOURNAL and the kind indulgence of the editor may permit.

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Devoted to the Interests of the Medical Profession of Indiana

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EDITORIALS

THE ENEMIES OF THE AMERICAN MEDICAL ASSOCIATION AND OF MEDICAL PROGRESS.

Under date of January, 1909, Mr. Henry R. Strong, editor and proprietor of the *National Druggist*, issued and distributed broadcast a book of 131 pages with the significant title, "The Machinations of the American Medical Association: An Exposure and a Warning." Aside from the fact that the book contains an appeal to the druggists to unite with the Proprietary Association in preventing pure food and drugs legislation which interferes with the proprietary business, it contains a villainous attack upon the medical profession as a whole, the American Medical Association, and in particular some of the prominent medical men who are or have been prominently identified with medical progress and in particular with the effort to secure pure food and drug legislation and reform in drug prescribing by physicians. The book is so full of misrepresentations and false statements, and so characteristic of the whine of a justly-whipped boy, that no unbiased reader would for a moment give it serious consideration.

Following closely upon the appearance of this publication by Mr. Strong the medical profession is treated to another example of what can be expected from a debauched medical press, in the form of a particularly defamatory and scurrilous article, in which an attempt is made to besmirch and blacken the name of the editor of *The Journal of the American Medical Association* and ridicule and discredit the work of the Council on Pharmacy and Chemistry.

For any medical journal worthy of the name to oppose the progress of the American Medical Association and the work of the Council on Pharmacy and Chemistry is bad enough, but when any medical journal having the slightest element of decency indulges in defamatory personalities the medical profession which helps to support such publications should blush with

shame. But a cause must be in a bad way when its defenders find it necessary or advisable to stoop to such tactics. The result can but be disastrous for the cause and hasten its complete downfall. It deserves to fail when it can not be won on its own merits.

The American Medical Association stands for all that is progressive and honest in medicine. Its purity of purpose is not deserving of question. It has been a means for improving the scientific, social, economic and moral atmosphere surrounding medical men. It has established and maintains a journal which is the largest and the best medical periodical published in the world. It has aided in securing just and beneficent medical laws and much needed legislation pertaining to public health and sanitation. It has promoted medical organization which has brought medical men together for scientific, social and economic advancement. It has aided in raising of the standard of medical education and in increasing the proficiency of medical men. It has aided in elevating the standard of pharmacy and in securing pure food and drug legislation, and reform in drug prescribing by the medical profession. And this last has brought down upon its head the wrath of a horde of proprietary manufacturers and the medical journals which they control through the advertising patronage bestowed.

The Council on Pharmacy and Chemistry was established by the House of Delegates (composed of representatives from each state association) and was authorized to investigate and report on the various proprietary preparations offered by the manufacturers and extravagantly praised and exploited in circulars, advertisements and other literature. This at once aroused the antagonism of many of the proprietary manufacturers, and for the one reason, and one reason only, that their products could not, and it has been demonstrated that they have not, stood the light of investigation. These manufacturers readily secured as allies in their unworthy cause many of the so-called independent medical journals, and for the reason that these journals were and are now profiting by the enormous advertising patronage bestowed by the proprietary manufacturers. In fact, not a few of these independent (dependent would be a better term) journals would have to go out of business if it were not for proprietary medicine advertising, and they are therefore fighting for their own lives while working for the interests of the proprietary manufacturers and at the same time

fighting the American Medical Association and all that is progressive and honest.

The House of Delegates of the A. M. A. ordered the reports of the Council on Pharmacy and Chemistry published in *The Journal of the A. M. A.* This led to a fight on that periodical. *The Journal of the A. M. A.* is issued under the authority and control of the Board of Trustees, and edited by Dr. George H. Simmons. This led to an attack on Dr. Simmons, who is simply the representative of and carries out the policies of the association, and he has been heralded as the great arch conspirator and the devil incarnate in the scheme to dethrone all legitimate medicine, which in the minds of the proprietary manufacturers and their subsidized medical press principally includes the fraudulent, inert or objectionable proprietaries fully exposed or about to be exposed in the book entitled "The Propaganda for Reform," published by the American Medical Association. A ceaseless warfare has been waged by these enemies of medical progress, and they have not confined their energies to legitimate argument but have stooped to personalities which have no place in the argument for a just cause.

The personal attacks upon Dr. Simmons and the effort to besmirch his character are unwarranted and unjust. No matter to what school Dr. Simmons belonged, or what petty violations of the code of ethics he was guilty of a quarter of a century ago, he has by years of faithful and efficient service completely demonstrated his fitness for the responsible position he now holds, and the American Medical Association is fortunate in having one of his capabilities to manage its great journal. If he requires any vindication, his work since his connection with the A. M. A. in an official capacity is sufficient. It is because he has accomplished things and because he is fitted for the position he holds that he is now the target for a horde of traducers. Under any circumstances he would have critics, but inasmuch as he has done something worth doing, it is but natural that he should receive greater condemnation from a few of the selfishly dissatisfied ones.

But we have faith in the good judgment of the members of the American Medical Association, now happily largely in the majority, who by their voice and vote have placed the American Medical Association and its work where it is now, and we do not believe the sordid wail of a subsidized medical press nor the ravings of the venal proprietary manufacturers will be given the slightest attention or affect the onward progress of the good now being done in the name of

medical progress by the association. If anything, the attacks to which we have called attention should bring all right-thinking men to more active support of the association and its efficient and capable agents, even though the vitriolic attacks to which we have alluded are the convulsive struggles of a dying cause.

PROPER SUPPORT OF THE COUNCIL ON PHARMACY AND CHEMISTRY.

If a member of a physician's immediate family be taken seriously ill, what is the course that is most apt to be adopted by that physician, provided he himself be blessed with a reasonable amount of good judgment? In all human probability he will go over the clinical picture and determine for himself just what fellow-practitioner is best equipped to care for his beloved one, and in making his choice several elements will be taken into consideration. Honesty of purpose, skill, judgment, painstaking carefulness, and broad experience will all enter into the selection of the consultant. The mercenary doctor and the man who adopts short-cut methods with snap-shot diagnoses will not be chosen for the sacred trust of rendering aid to his fellow in distress. The selection of the consultant being made, what, then, is the course of procedure expected of such a one? It is presumed that he will bend every effort toward the establishment of an accurate diagnosis and the institution of the best and most rational line of treatment, leaving not a stone unturned toward rendering the most efficient service at his command. Any other course proves him false to his trust and open to the legitimate censure of medical science.

Obviously parallel is the case when any physician is called to minister to a patient. If he knowingly neglects the fundamental essentials at his command; if he wilfully adopts inferior measures through mercenary or other selfish motives, he is culpable in the eyes of his profession and unfaithful to his trust.

It has long been observed that the great master hands in drug therapy have been those who made use of the simplest and hence the most efficacious remedies, the reason for which is most patent. If the medicinal armamentarium is kept at a reasonable minimum, there is a corresponding maximal opportunity for the acquirement of an accurate knowledge concerning the physiologic effects and therapeutic indications for each and every member of the group. Such a knowledge is manifestly impossible for the man who indulges in polypharmacy, and his prescriptions will,

therefore, be as unsatisfactory as they are unscientific. So that he who makes use of the pharmaceutical concoctions with which the profession is daily besieged, without any study of their contents and properties other than that furnished by the smooth-tongued detail man, is doing his patients an absolute injustice. It is for the correction of just this wrong that the American Medical Association labored to assemble into one body the Council on Pharmacy and Chemistry, a group of men of the very highest efficiency, to do that for which the busy practitioner has neither the time nor the qualifications. By virtue of having made of this work a life study, by being each and every one a man of broad experience and high ideals in his line, in short by being the best of the kind that can be had, this body's deliberations merit the greatest consideration and the widest support within the gift of the American profession. For their services they receive the most meager compensation, but glory in the work because of the humanitarian interest, and give of the fund of their knowledge that the light of true science may continue to shine. Honesty, fairness to all and accuracy of knowledge have made up the slogan of their work, and we bespeak for this body a continuance of the hearty support of the medical profession of our state.

"VIVISECTION"

(From the *Lay Pen.*)

Were the entire lay press of our country disposed to look upon vivisection in as sane and logical a way as *Collier's Weekly* the paths of experimental medicine, surgery and physiology would soon cease to be harassed by the shallow fads of the antivivisectionist. We are pleased to quote from the Jan. 23, 1909, issue of the above-named periodical as follows:

Literary reference or allusion makes readable sometimes the barer facts of science. The vogue of Rudyard Kipling will render more popular a scientific cause to which he happens to lend his name. It is for that reason, rather than for the value of his statement, that we quote the poet as follows on a question of the day:

"The doctor is exposed to the criticisms of persons who consider their undisciplined emotions more important than mankind's most bitter agonies; who would cripple and limit research for fear research might be accompanied by a little pain and suffering. But if the doctor has the time to study the history of his own profession he will find that such persons have always been against him—ever since the Egyptians erected statues to cats and dogs on the banks of the Nile."

The opponents of vivisection ought to oppose murder, and therefore to be vegetarians. They should also object to forced labor and therefore never ride behind

a horse. They should, in sound logic, oppose larceny and not drink milk. They should never allow an animal to be punished in process of being trained. That in scientific experiment few animals are taken, compared to those killed for food or kept at forced labor all of their lives, most of them are unconscious. The question of when to use anesthetics must be left to science, since in a small but important fraction of the work drugs must be dispensed with; and it would be fatal to have ignorant outsiders concerned in so critical a decision. Such outsiders are capable of judging sanely neither about the amount of pain involved nor the importance of the knowledge to be obtained. Says President Eliot of Harvard:

"The humanity which would prevent human suffering is a deeper and truer humanity than the humanity which would save pain or death to animals."

Moreover, the experiments give knowledge which saves pain not only to millions of human beings, but in many cases to animals themselves. In tuberculosis, for instance, men of science are fighting for cattle as well as for men; in lockjaw for horses as well as for our own kind. The marvellous results in diphtheria have happily now become known to almost every mother. To stop animal experimentation would check the advance of surgery. It would take away our strongest weapon in the promising fight being waged against cerebrospinal meningitis, bubonic plague, dysentery and malaria. It would reduce us to despair in the harder but still hopeful contest with cancer.

It is really refreshing to find one lay journal, at least, so consistent in its remarks and efforts in support of medical science as this weekly has been. Indeed, in the face of the opposition to which we are accustomed to struggle in behalf of the public health and welfare, an opposition among an otherwise intelligent people, a race peculiarly keen to an appreciation of public benefaction along other lines, the sentiments above expressed come almost as a voice from the wilderness. May they take root and flourish!

We are unacquainted with any of the cult of the so-called "antivivisectionists" who has yet been unselfish enough to offer up his own person for the "poor dumb animal" whose fate he so bemoans, and yet it is a safe assertion to make that any one of the sect would be glad enough to avail himself of the benefits of vaccination, antitoxin or guinea-pig tests for suspected infections in his own family. Is there in their midst the peer for unselfishness of the humble Carroll or Lazear? If so let him come forth and medical science will accord him his true worth, thus sparing the dumb animal the more.

LIABILITY OF EMPLOYERS AND EMPLOYES FOR MEDICAL AND SURGICAL FEES.

No class of people are so overworked, for charity's sake, and no class of people bear up so willingly and uncomplainingly under a burden of imposition as the medical profession. But there is a time and a place for everything, and now is

the time to set on foot measures to correct some of the evils in the name of charity under which we are laboring.

In a recent decision of our appellate court concerning the liability of a corporation for medical and surgical services rendered an injured employé, the following announcement occurs: "The injured must depend on the charitable kindness of some medical man to help him if his friends are not able to help him and if he is not able to pay, as there is no binding obligation on the company."

If this is the law, then let us try to have it amended so that it will protect the doctor as well as the corporation. It is asking a good deal from a doctor to expect him to gratuitously care for a corporation's injured, oftentimes when the injury for the care of which the doctor has been called has been caused by failure on the part of the corporation to make needed improvements to prevent accidents, and all for the purpose of making it possible for the corporation to increase dividends to its stockholders.

When called upon to attend an injured person the doctor has no time to investigate the question of responsibility for medical or surgical fees, and if he take the time, the injured may perish as a result of the delay in receiving the necessary attention. Some one representing the corporation generally calls the doctor, and the law says the doctor must respond, but the law also says that the representative of the corporation has no right to bind the company to pay for medical or surgical attention to an injured employé. This savors of oppression of the medical profession for the benefit of the corporations.

Humanity demands that the injured shall be cared for, but why shield the corporation and impose upon the willing doctor? Why not make those directly or indirectly the cause of the accident shoulder the responsibility for the care of the injured, and why ask the doctor to bestow charity when the corporation, often rich, profits most from the benevolence? There is an urgent demand for a change in our laws pertaining to this question so that they may be made to conform to sensible rules of justice and fair play.

Senator Bland has introduced in the senate of our Indiana legislature a bill to regulate the liability of employers and employés, and if it is not too late when this number of THE JOURNAL is published we hope that every interested reader will at once communicate with his senator and representative with a view to securing an addition or amendment to the act regulating the liability

of employers and employés which will provide for the payment of fees for medical or surgical services rendered corporation injured.

EDITORIAL NOTES

WITH this number of THE JOURNAL we begin with an entirely new mailing list. THE JOURNAL is sent regularly to only those who have paid their Association dues for 1909.

THE treatment of tuberculosis with mercury succinimide is worthy of more extended trial if some of the statistical data given by a few competent men who are now using the treatment can be considered seriously. It is claimed that the remedy has a decided germicidal action, while at the same time acting as a reconstructive.

DR. KAHLO, President of our Association, in a special article in this number of THE JOURNAL, discusses in a very thorough manner some questions of vital interest to the Association and offers some suggestions and advice which are worthy of serious consideration. The carrying out of his plans will result in great benefit to the Association as a whole as also to the individual members.

IT may be interesting to our readers to know that one member of a county society in Indiana traveled 22 miles through a storm to attend a regular meeting of his society, and as a regular attendant upon the meetings of his society he makes these drives uncomplainingly and finds profit in so doing. We wish that there were more physicians in Indiana who were half as interested in the work of their county medical societies and willing to submit to half as much sacrifice in time and bodily comfort to attend medical society meetings.

THE JOURNAL now carries the advertising of three of the largest and most reliable pharmaceutical manufacturing houses in the country. Each has done much in experimental research work which has been of inestimable value to the medical profession and for the ultimate good of humanity, and all have shown a sincere desire to elevate the standard of pharmacy and chemistry, as shown by their support of the work of the Council on Pharmacy and Chemistry. It is such firms that deserve and should have the commendation and support of medical men and we bespeak for them favorable consideration.

DURING the last two weeks of the present session of the Indiana legislature there will be a flood of bills presented for legislative action. Most of the freak bills will be buried in a committee room, but a few that are positively pernicious in effect will receive a favorable committee report and come up for discussion and ballot. Among these there may be one or more pertaining to medical legislation, and it will be well for medical men and their friends to be on guard to prevent, if possible, legislation which may be far reaching in its baneful effect. The Association has a committee on medical legislation, but it would be well if every county medical society also had a committee on medical legislation for the purpose of bringing direct home pressure to bear upon representatives in the legislature.

IN a recent number of a well-known journal of optometry occurs this astounding and suggestive bit of information: "The oculist's or (more strictly) the ophthalmic surgeon's sphere of work is the treatment of diseased eyes and the performance of operations when necessary. . . . We can refract better than the oculist, and if we consider the total cost of an oculist's services and the charge of the dispensing optician for putting up the prescription we can do the work not only better than they, but cheaper."

We expect to learn later that the oculist ought not attempt to treat diseased eyes or perform operations unless the licensed optician, or, as he calls himself, "the eyesight specialist," gives approval and consent. Truly the conceit and effrontery of the licensed optician has no limit.

IN response to an invitation from the editor of THE JOURNAL, the State Board of Medical Registration and Examination, through its president, Dr. Spurgeon, presents in this issue of THE JOURNAL a brief statement concerning some of the things that have been accomplished by the Board and other things that it is hoped will be accomplished later. In future issues of THE JOURNAL the Board will present articles dealing more specifically with the work of the Board in carrying out the various provisions of the Medical Practice Act.

It is possible that many of our readers are not familiar with the work of the Board, the obstacles met with in enforcing the medical law, and the aspirations of the Board in making the law more effective. We are, therefore, very glad to be able to present our readers with specific statements from the Board in the hope that mutual benefit will result.

WHEN the "detail man" calls upon you and offers you samples and literature of some pharmaceutical specialty ask him if his preparation has been approved by the Council on Pharmacy and Chemistry. If he can show that his preparation has been approved, then you are justified in giving him some consideration. If it has not been approved, then you are warranted in politely but firmly refusing to give him or his preparation any favorable consideration until such time as he can come to you with the endorsement you require. The honest manufacturer seeks and receives the approval of his preparations by the Council. The dishonest manufacturer does not often seek and never receives such approval of his preparations. You are safe in using any approved preparation, and you may or may not be safe in using a preparation not approved. To be on the safe side use only those preparations that have been approved.

ON January 6 President Roosevelt sent to the U. S. Senate the nomination of Dr. C. A. L. Reed, of Cincinnati, for appointment as first lieutenant in the Medical Reserve Corps, an honorary position. On January 19 Dr. Reed, in an interview published in the *Cincinnati Enquirer*, criticized the President for the suspension of certain provisions of the national pure food and drug law. On January 21 President Roosevelt transmitted a message to the Senate withdrawing the nomination of Dr. Reed for appointment in the Medical Reserve Corps. The indication is that the President took this means of manifesting his displeasure over the difference of opinion held by Dr. Reed, and, being sensitive to criticism, he took means to administer a rebuke which, in our opinion, was wholly unjustified and not in keeping with the spirit evidently intended to be sincere when the President made a plea for "a square deal" for every one.

EVERY doctor should not only subscribe for and read *Collier's Weekly*, but have that publication on the table in the reception room of his office so that waiting patients may read it. No other publication read by the laity has said so many logical and sensible things concerning the aims and objects of progressive medical men, and in such a forcible manner as to carry weight with the intelligent reader. The editorials concerning vivisection, medical inspection of schools, patent medicines, quackery, medical legislation,

public health matters and many other subjects of particular interest to medical men and also so vital to the health and happiness of the public at large, have been so wholesome in character and so forceful in expression that they must have carried great weight with thousands of people and resulted in immeasurable good in rightly molding public opinion. We can only hope that *Collier's* will continue the good work, as we also hope that medical men will give that publication not only approval, but the substantial support we have recommended.

THE bill to repeal the Nurses' Registration Law, if it passes the legislature, will in all probability be vetoed by Governor Marshall, for we feel certain that he will never give his sanction to such an iniquitous measure. The present law concerning the registration of nurses works no hardship to anyone, as it does not compel all nurses to register, but it does create a standard of efficiency and makes it possible for those who are entitled to register, to receive official recognition of their competency. The effort to repeal this law has undoubtedly originated with a few incompetent nurses who are unable to register, and are jealous of the recognized competency of those who have registered. It would be strange, indeed, if Governor Marshall, with his faculty for recognizing the fitness of things, permitted such a class of people to tear down what has been done to establish competency among those who are required to give skilled services to the sick and suffering. We have unbounded faith in the intention of Governor Marshall to do the right thing, and for that reason we think that medical laws and all allied laws are safe from injurious official action on his part.

IT is said that Dr. H. W. Wiley, chief of the Bureau of Chemistry and chief defender of the pure food law, is slated for dismissal from service. He is not liked by the enemies of the pure food law, who for the most part are manufacturers who have grown rich from the manufacture and sale of adulterated food products, and he is not in particularly good standing with President Roosevelt, who seems to have listened to the whine of the food adulterators rather than the wise and health-saving recommendations of Dr. Wiley. But the medical profession and several million sensible people in this country will sustain Dr. Wiley in his contentions, and if he loses his position as a result of doing what he knows to be absolutely right there will

go up a howl over this country which may be heard in Washington. It seems a pity that a man who has done such valuable service and who merits the confidence and respect of all the people should be obliged to submit to the annoyances incident to a threatened discharge from office. No soldier has ever served his country better than Dr. Wiley has in his fight for pure food, and he deserves the gratitude and the support of the people for his efforts. To us it would seem to be little short of a calamity to lose the services of such a valuable officer, and it is hoped that he will not be sacrificed to meet the requests or demands of a corporation that has no other than a sordid and selfish object to attain.

AT LAST the filthy disease and crime breeding tenements owned by Trinity Church of New York are to be torn down or remodeled and renovated so that they will be fit places for human beings to live. The good Christian gentlemen who have been willing to accept for the Lord's cause the money illy derived from the poor devils who were from force of circumstances compelled to live in the crowded and exceedingly insanitary buildings, were led to make this radical change in property holdings and income of the church as a result of the public disclosures of the church's iniquity and the gradually increasing vigilance on the part of officers entrusted with the duty of enforcing the tenement house laws.

What a pity that a church which preaches a christianity that teaches us to do the better and nobler things, not the least of which is charity, should be guilty of piling up millions and wrenching profit from some of the poorest as well as some of the most depraved and wicked of human beings. Not only were the Trinity tenements neglected as to christian religion, but health, happiness and even very life was made to contribute to the church coffers. We wonder what St. Peter will say to the vestrymen of Trinity Church who were responsible for the condition of affairs recently made public. Will he say, "Well done, thou good and faithful servant," etc., or will he at once sentence them to eternal damnation? How fortunate it is that Trinity Church is an exception among churches and organizations that carry the Christian religion and its beautiful teachings to every quarter of the earth.

WORD comes from Paris that the duchess de Chaulnes, formerly Miss Theodora Shonts, of America, has greatly shocked French society by

insisting upon the right of a mother to nurse her own baby, instead of surrendering her offspring to a nurse immediately it is born, as is said to be the French custom.

It is to be hoped that the ban on mother's milk in France is confined to the nobility and upper society alone, for otherwise that country will soon be the victim of race suicide with which she is reputed to be threatened. It would seem that babies are few enough there, without wilfully slaughtering those that are unfortunate enough to be brought into the world minus that great mother's love that is revealed by the picture of the nursing mother.

True it is, alas, that the same pernicious idea has seized upon a few of our American women—our women to whom the whole world bows down in reverence as truly God-given creatures—but, Heaven be praised, such are mighty few and to the average mother of our soil, were it not somewhat of a sacrilege so to believe, it would seem that in the creation of so barren a type of womanhood Providence has been wasting time.

The whole pediatric world has been striving for years to find a full substitute for mother's milk, but never with the purpose of robbing the mother of the divine privilege with which she has been blessed. Exceptions and emergencies present, of course, when it is absolutely essential that substitute feeding, either temporary or permanent, be instituted, and it is our mission to bend every effort toward imitating Nature as perfectly as possible when such emergency does arise; however, it has been said, and perhaps rather wisely, that were we to put as much ingenuity into the correction of defects of the mother's supply of nourishment as has been made use of in seeking out substitutes, possibly there would be a decided drop in infant mortality.

All honor to the duchess de Chaulnes and her American sisters!

IT IS safe to say that many Indiana doctors are prescribing drugs and pharmaceutical specialties the quality and action of which are not known to them. This may be due to the influence of smooth-talking agents or detail men and too ready belief in the extravagant statements of manufacturers, or it may be due, as in the use of tinctures, fluid extracts, elixirs and chemicals, to the practice of economy in making price the only consideration in making purchases, it being forgotten that the best rule to follow is "not how cheap, but how good." Under no consideration is a physician justified in prescribing or using any drug or pharmaceutical prepara-

tion the quality and action of which are not reasonably well known to him. Few doctors have the time, much less the ability, to determine the truth or falsity of statements of manufacturing houses as to the quality and action of pharmaceutical specialties, and it was to determine the facts for the medical profession that led to the establishment of the Council on Pharmacy and Chemistry by the American Medical Association. This Council soon learned that nearly all pharmaceutical houses have been lying to us for years, and have definitely proven that many houses are still lying to us, and that some medical men choose to believe the lies of irresponsible and dishonest manufacturers rather than the truth from a body of men of their own profession having the highest competency and unquestioned integrity. But the number of medical men who are depending upon the Council is constantly growing, as is also the number of manufacturers who recognize the competency and fairness of the Council as well as the necessity of and the profit to be derived from a compliance with the rules of the Council in obtaining approval of preparations. Thus is the standard being elevated and to the best interests of all concerned. But just as long as there are doctors who will, through ignorance or intention, ignore the recommendations of the Council we will continue to have houses manufacturing preparations of inferior quality. We hope that every member of the Indiana State Medical Association will do justice to himself and to his patients by prescribing only U. S. P. or N. F. preparations, and that no pharmaceutical specialty will be used that has not received the approval of the Council on Pharmacy and Chemistry.

WE HAVE received many compliments concerning our department devoted to society proceedings, but, as might be expected, there are occasional unfounded complaints from county societies as to our disposition of space in this department. We wish it distinctly understood that no county society report is received which does not obtain space in THE JOURNAL, either in full or condensed form. But it should be remembered that we are obliged to regulate this department just as we regulate all other departments, and make our copy fit the space. Some months we have an overabundance of society reports, and, in order to give them all recognition, we are obliged to condense the reports. Other months there is a scarcity of society reports and we can publish in full the reports we have on hand.

Generally speaking, nearly all of the county society reports are published in full, but when such active societies as those at Indianapolis, Fort Wayne and Terre Haute send in very long society reports we must of necessity do some condensing, or more space would be required for the society reports than we give to all other matter combined.

One critic has complained that the editor finds space for plenty of reports from the Fort Wayne Medical Society, and to this we have the following to say: The secretary of the Fort Wayne Medical Society is one of the best in the state, and he sends in many pages as a report of each meeting of his society, and when it is taken into consideration that the Fort Wayne Medical Society meets every week it will be readily understood that the copy from this one society alone amounts to enough to fill *THE JOURNAL* if it were all published. Therefore, in answering the criticism, if such it is intended to be, we desire to say that the Fort Wayne Medical Society has to suffer more condensation of its reports than any other county society in the state. If other societies had secretaries half as active, the reports of the Fort Wayne Medical Society would have to be still further condensed.

As we have frequently stated before, we desire to be absolutely fair with all of the county societies by publishing all reports, at least in condensed form, but we do ask that reports be something more than a mere recital of the fact that the society met with such and such members present, elected officers and then adjourned. The average reader does not care whether Dr. Jones attended the Allen County Medical Society or not, but he is interested in knowing what new theories or facts Dr. Jones has brought out in his paper, as also what Dr. Smith or some one else had to say in discussing the paper, providing anything of interest was said. To give space to Dr. Smith's discussion when Dr. Smith simply complimented the essayist and agreed with all that was said is a waste of valuable space which could be better given to something else. Therefore, we ask the county secretaries to report faithfully the meetings of their societies for notice in *THE JOURNAL*, but in doing so to give us only items of interest to the general reader. Even a short abstract of not more than 25 words of any paper, and a report of any one discussion, even if less than 15 words, is acceptable if the essence of what has been presented in the paper or in the discussion is given. We recognize the fact that it is not always an easy task to "boil down" reports for publica-

tion, but we hope to have the assistance of county secretaries in making our department devoted to society proceedings of special interest to our readers, and something more than announcements that the societies met and adjourned. The department gives us more work than all of the rest of *THE JOURNAL* put together, but we shall be pleased to give every aid and encouragement to the task of making this department a leading feature, and we earnestly solicit the cooperation of the county secretaries in accomplishing this end.

AT THE recent meeting of the Council, held in Indianapolis on January 22, the question of limiting the number and improving the quality of the papers presented at the Terre Haute session of our Association was discussed. The Council went on record as favoring a program of not to exceed 30 papers, or more than 5 papers for each meeting. This will give 10 papers for the two general meetings and 10 papers to each of the two meetings of the sections. The Council also approved the action of the program committee in selecting papers because of worth and not because referred by any particular county society, the old rule of accepting papers referred by county societies having become inoperative with the adoption of the new Constitution. Papers referred by county societies will be considered in the order of reception, as also in accordance with merit, but the fact that the paper has been so referred does not carry with it an obligation on the part of the committee to accept the paper. To facilitate the work of the committee and insure a better program, all essayists whose names are to appear on the program will be required to place their manuscripts and abstracts in the hands of the committee not later than July 1. Various members will be appointed to formally open the discussion of papers, the names of such members to appear on the program. The committee will urge those appointed to formally open the discussion of papers to prepare carefully their discussions, and if desired such discussions may be read from manuscript. The entire proceedings of the Association will be published in *THE JOURNAL*, and all members who take part in the program are urged to assist the editor by careful correction of typewritten copy or stenographer's notes submitted after the session.

The Council has approved the plan of President Kahlo to call a meeting of the House of Delegates on the day preceding the first day of the annual session, as also the plan to call a meeting of county society officers with a view to

discussion of topics of vital interest to medical organization. If all of the plans of the officers and committees are carried to a successful termination the Terre Haute session will be the best from every point of view in the history of the Association. Special effort will be put forth to have the scientific program one of unusual excellence, and ample time will be provided for a thorough discussion. This will mean more and better scientific work, which is one of the chief aims of the Association.

DEATHS

DR. JOHN L. HOWARD, of West Baden, Ind., died Jan. 23, 1909. He was at one time house physician of the French Lick Springs Hotel. He was a member of the Orange County Medical Society.

DR. JOHN S. STOCKWELL, a graduate of Rush Medical College, Chicago, and a member of the American Medical Association, died at his home in Charlestown, Ind., January 6, from angina pectoris, aged 61.

DR. GEORGE P. LITTLEPAGE, of Warrenton, died at his home, Dec. 30, 1908, after a very brief illness, from cholecystitis. He was born Sept. 20, 1852, and graduated from Jefferson Medical College, Philadelphia, in 1877.

DR. A. M. D. HENDRICKSON died at his home in Magnet, Perry County, Indiana, Dec. 31, 1908. He was born at Springfield, Tenn., Dec. 8, 1850, and graduated from the Nashville Medical College March, 1883. The immediate cause of his death was myelitis.

DR. J. M. BASH, for many years a physician of Warsaw, died at his home, January 29, of heart trouble. He had been in ill health for several years. Dr. Bash was a graduate of the Indianapolis Medical College and a thirty-second-degree Mason. He was a member of his state and county medical societies.

DR. SILAS C. DOVE, of Westfield, Ind., died at his home, Jan. 18, 1909, of heart failure. After several years' service as a surgeon in the Civil War, he came to Westfield in 1864 and

began the practice of medicine. He served four terms as coroner of Hamilton County. At the time of his death he was a member of the County Board of Health. He was an active member of the Hamilton County Medical Society, having been twice its president.

DR. HERMAN G. NIERMAN, one of the well-known younger physicians of Fort Wayne, died at the St. Joseph Hospital, following an abdominal operation, on January 31, aged 38 years. He received his medical degree from the University of Michigan, and had practiced medicine in Fort Wayne for several years. He was an active member of the Fort Wayne Medical Society, of the Indiana State and American Medical Associations.

PERSONALS

DR. E. W. POINIER, of Andrews, is critically ill with typhoid.

DR. M. G. MOORE, of Vincennes, is spending his vacation in Florida.

DR. MARY MICHELLE, formerly of Indianapolis, has located in Vincennes.

DR. MAUDE ARTHUR, formerly of Glendale, has located at Washington.

DR. CHAS. S. BRYAN, of Vincennes, was re-appointed county physician.

DR. M. M. McDOWELL, of Vincennes, is serving his second term in the Senate.

DR. EDGAR COX, of Kokomo, is enjoying a vacation of a few weeks in Porto Rico.

DR. A. C. BARTHOLOMEW, formerly of Logansport, has removed his office to South Bend.

DR. J. D. SOURWINE and wife, of Brazil, spent the month of January at Attica Springs.

DR. A. F. TULLY and wife, of Brazil, are spending the winter at Hot Springs, Ark.

DR. D. V. MCCLARY, of Dale, has been elected Secretary of the Board of Health of Spencer County.

DR. L. H. DOWNEY, of Vincennes, was appointed Secretary of the Knox County Board of Health.

DR. JESSE H. BRIGGS and Miss Bessie Madden, both of Churubusco, were united in marriage Jan. 26, 1909.

DR. RICHARD W. SIPE, of Orange, fell on a slippery pavement at Rushville, January 8, and injured his leg.

DR. CHAS. E. BARNETT, of Fort Wayne, has returned from a visit of a few months at the European clinics.

DR. JOHN H. McCUTCCHAN, of Evansville, who returned home from Europe a few weeks ago, is reported ill at his home.

DR. T. C. KENNEDY has moved his office from the K. of P. Building to the Newton-Claypool Building, Indianapolis.

DR. J. M. KITCHEN, of Indianapolis, has been in the Methodist Hospital for several weeks as a result of a stroke of apoplexy.

DR. G. W. COMBS has changed his office from 235 North Pennsylvania Street to 329 North Delaware Street, Indianapolis.

DR. R. B. HAYES, who has practiced at Pierreeton for about a year, has returned to his old home at Guyman, Okla., where he will remain.

DR. GEO. W. MCCASKEY, of Fort Wayne, delivered the principal address at the annual meeting of the Pittsburg (Pa.) Medical Society, held early in January.

DR. PERRY WOOLERY and family, of Sheltonville, left in January for North Carolina, on

account of the Doctor's health. They expect to return about April 1.

DR. LORIN W. SMITH, of Wabash, who has been confined to his bed in the hospital for three weeks by an acute attack of ethmoiditis, has again resumed his practice.

DR. J. E. McCONNELL, of Delta, Colo., formerly of Carlisle, Ind., reports that his health is much improved, and that he expects to take up the practice of medicine there soon.

DR. CARL H. WRIGHT, of Yorktown, and Miss Josephine Barido, of Kane, Pa., were united in marriage January 12. Dr. Wright is a member of the Delaware County Medical Society.

NEWS, NOTES AND COMMENTS

THE Kokomo City Council has voted an appropriation of \$25,000 for a municipal hospital.

DR. CHARLES S. BRYAN and Miss Helen Marie Fendrich, of Vincennes, were united in marriage Thursday, Jan. 14, 1909.

MASTER WALTER McFARLAND, the infant son of Dr. O. J. McFarland, of Hamilton, Ind., died at the Hope Hospital, Fort Wayne, Jan. 16, 1909, from strangulated hernia.

ALBERTA E. SHIPLEY, wife of Dr. John B. Shipley, of Laketon, died at her home, Oct. 25, 1908, following an illness from ulceration of the stomach with typhoid, aged 28 years.

THE Physician's Defense Company announce their removal to the "Physician's Defense Building," corner of Wayne and Clinton Streets, Fort Wayne. The building is fireproof and modern in every way; the hall floors are laid in mosaic, and the finish throughout is in oak.

ON January 1 the *Indiana Medical Journal* and the *Central States Medical Monitor*, both published at Indianapolis, were consolidated and are now issued in new form under the name of

The Indianapolis Medical Journal. There will be a joint editorship, Dr. A. W. Brayton and Dr. Samuel E. Earp, formerly editors of the two journals entering into the consolidation, being selected to edit the new publication.

THE Modern Woodmen of America, a fraternal insurance society with headquarters at Rock Island, Ill., has established an up-to-date sanitarium, the tent colony plan being employed, on a tract of 1,380 acres situated seven miles from Colorado Springs, Colo. The first patients were admitted Jan. 1, 1909, to the number of sixty. Only those who are curable or whose lives may be prolonged for a certain length of time will be admitted as patients. As there are 13,000 local camps and over 1,000,000 members, it is evident that this movement is destined to reach a very large number of people.

CAPTAIN SWADLEY, of Wabash, was arrested in Huntington on Jan. 6, 1909, for practicing medicine without a license. Swadley had been operating quietly in Huntington for several months. Members of the Huntington County Medical Society doubted the legality of his practice, and, after an investigation, upon the suggestion of the local medical society, Dr. M. H. Krebs, secretary of the society, filed an affidavit against him. When taken before the judge he asked for a continuance of his trial until January 7, and acknowledged himself bound to the state in the sum of \$100 for his return. On January 7 he pleaded guilty and was fined.

THE thirty-fifth semi-annual meeting of the Northern Tri-State Medical Association was held at Ann Arbor, Mich., Jan. 12, 1909, with a large attendance of doctors from southern Michigan, northern Indiana and northeastern Ohio. The following interesting program was presented:

"A New Factor in the Diagnosis of Gastric Ulcer," by Dr. A. W. Cranc, Kalamazoo; "The Early Diagnosis of Gastric Cancer," by Dr. L. Breischer, Detroit; "Certain Phases in the Treatment of Syphilis," by Dr. Jeremiah Metzger, Toledo; "Why Mastoiditis Is Sometimes Misunderstood," by Dr. Emil Amberg, Detroit; "Intestinal Tuberculosis, with Report of Cases," by Dr. G. W. McCaskey, Fort Wayne; "Further Observations on Cancer," by Dr. Geo. W. Crile, Cleveland; "Some Common Misconceptions of the Symptomatology of Aneurisms of the Thoracic Aorta," by Dr. Robert B. Preble, Chicago;

"The Treatment of Tetanus," by Dr. Willard Hunter Hutchins, Detroit; "The Present Status and the Future Outlook of Tuberculosis," by Dr. Victor C. Vaughan, Ann Arbor, Mich.

SOCIETY PROCEEDINGS

THE COUNCIL.

The mid-winter meeting of the Council of the Indiana State Medical Association was held at the Claypool Hotel, Indianapolis, Friday, January 22. The meeting was attended by George D. Kahlo and F. C. Heath, president and secretary of the association, respectively, and the following councilors: George Knapp, Vincennes, Second District; Walter J. Leach, New Albany, Third District; Joseph H. Weinstein, Terre Haute, Fifth District; D. W. Steveuson, Richmond, Sixth District; W. N. Wishard, Indianapolis, Seventh District; G. W. H. Kemper, Munieie, Eighth District; George Rowland, Covington, Ninth District; Chas. H. McCully, Logansport, Eleventh District; Albert E. Bulson, Jr., Fort Wayne, Twelfth District, and C. A. Daugherty, South Bend, Thirteenth District. Dr. W. N. Wishard, president of the council, presided.

The editor of THE JOURNAL made his annual report and included in it a detailed statement covering the affairs of THE JOURNAL from Sept. 1, 1907, until Jan. 1, 1909. The report showed that instead of publishing a journal of 48 pages, 8x11 in size, 3,000 copies each month, as originally planned, THE JOURNAL has regularly contained from 56 to 72 pages, an excess of 3,000 copies each month have been issued, the mechanical make-up has been excellent, and no nostrum or other objectionable advertising has ever appeared in its columns. Over \$3,000 worth of objectionable advertising was refused.

The report showed that THE JOURNAL has aided in organization work by sending out many sample copies and hundreds of letters, and is now engaged in compiling, at great labor and expense, a complete biographical index of all the physicians of the state.

The financial report, covering the period of sixteen months, in condensed form, is as follows:

• RECEIPTS.	
From the association, 75 cents subscription from each of 2,643 members.....	\$1,982.25
From advertising, subscriptions and sale of Journals	2,727.51
Bills receivable	513.00
Total	\$5,222.76
DISBURSEMENTS.	
Printing, including THE JOURNAL, stationery, circulars, postal cards, index cards, etc.....	\$2,703.85
Postage, including mail charges on THE JOUR- NAL, letters, circulars, postals, sample copies, etc.	395.00
Freight, express and cartage.....	80.18
Stenographers and office help.....	1,010.00
Supplies, including typewriter, desks, filing cases, mimeograph, letter copier, ink, etc..	316.47
Commissions and salaries to agents.....	240.16
Incidental expenses	131.50
Editor's honorarium	345.80
Total	\$5,222.76

The report received favorable comment from all the members of the Council, and Dr. George D. Kahlo, president of the association, offered the following resolution, which was unanimously adopted:

Resolved, That the Council of the Indiana State Medical Association heartily commends the work of Dr. Albert E. Bulson, Jr., as editor of our official journal and that we each of us pledge our cooperation in his future effort. We believe that THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION is of a very high order of excellence, and will bear favorable comparison with any similar publication.

In thanking the Council, Dr. Bulson said that it would be his pleasure to attempt to make THE JOURNAL larger and better during the coming year. He called attention to the fact that Dr. Ben P. Weaver, as assistant editor, was entitled to a share of credit in making THE JOURNAL a success, and on motion Dr. Weaver was given a vote of thanks for his valuable assistance.

On motion of Dr. Rowland, seconded by Dr. McCully and duly carried, Dr. Bulson was authorized to continue the publication of THE JOURNAL for 1909 on the terms prevailing during 1908, and that all of the conditions and rules governing the acceptance of advertising and the editorial and business management of THE JOURNAL, as heretofore approved by the Council, shall continue in force for the year 1909.

Dr. Wishard called attention to the effort being made to have uniform requirements for all prospective practitioners of medicine, and said that a committee had virtually gained consent of the various schools of medicine to have the Indiana University fix the standard of requirements. On motion of Dr. Stevenson, seconded by Dr. Heath, the work of the committee was endorsed.

President Kahlo and Secretary Heath discussed the question of limiting the number of papers for the Terre Haute meeting, and reported that the committee on scientific work had the authority to not only select the papers for the program but limit the number. It was announced that the committee intended to limit the number of papers read at any one meeting to five, or thirty papers for the session. In the selection of the papers for the program the committee will be guided by the subject selected, the merit of the paper, and the location of the essayist, it being intended to have all portions of the state represented on the program. On motion of Dr. Kemper, seconded by Dr. Daugherty, and carried, the committee was given full power to act, and was instructed to make selections for the program from manuscripts placed in the hands of the committee for approval. It was also moved by Dr. Kemper, and seconded by Dr. Leach, and carried, that each essayist be required to place in the hands of the committee the manuscript and a synopsis of not less than fifty nor more than two hundred words, before July 1, and that no paper be included in the program which has not been submitted in compliance with this rule.

Dr. McCully offered the following resolution: "That it is the sense of this Council that the committee on Scientific Work be not bound by the action of any county society in referring any paper, and that it be hereby authorized to act in accordance with the general plan proposed and discussed at this meeting." Dr. McCully moved the adoption of the resolution, seconded by Dr. Rowland, and duly carried.

The plans for the Terre Haute session were discussed at length, including the advisability of calling a meet-

ing of the House of Delegates on the day previous to the regular session. Concerning this latter subject a motion was passed instructing the president to call a meeting of the House of Delegates for the day preceding the first day of the annual session, and that an attempt be made to have a separate meeting of the officers of county societies on the same day.

Dr. Bulson rendered his treasurer's report for the year 1908, and with it tendered his resignation. His report was as follows:

Gentlemen of the Council:

The fiscal year of the Indiana State Medical Association ended Dec. 31, 1908, and as at that time the total income and all bills against the association for the year were in the hands of the treasurer, it seems entirely proper to submit to the association, through you as the authorized finance committee, my treasurer's report for the year 1908. I also wish to tender my resignation as treasurer of the association, for the reason that my successor should assume the duties of office with the beginning of the fiscal year, and he could not do so if he were elected at the Terre Haute meeting, when my term expires. You are therefore urged to accept my resignation and carry out the provision of the constitution which requires you to elect officers to fill vacancies occurring between meetings. In voluntarily retiring from the position of treasurer, which I have held for thirteen years, I desire to thank the association for the honor conferred and its attending evidence of confidence and trust.

My treasurer's report for 1908, with vouchers for the several items, is as follows:

ALBERT E. BULSON, JR.,
Treasurer.

In account with the Indiana State Medical Association for the fiscal year ending Dec. 31, 1908.

DEBIT.

To cash balance on hand from 1907.....	\$520.87
To cash from secretary, dues collected for the year 1908	2,643.00
Total	\$3,163.87

CREDIT.

By cash to secretary, honorarium and incidental expenses	\$324.84
By cash to chairman committee on necrology, honorarium	13.15
By cash to J. B. Champion, stenographer 1908 meeting	125.00
By cash to Sentinel Printing Company, printing	31.35
By cash to councilors, organization expenses.....	396.39
By cash to expressage, freight and drayage on index cards, guides and cabinets.....	7.20
By cash to A. M. A. canvassers for new members secured	121.00
By cash to United States Express Co., expressage stationery to councilors.....	6.70
By cash to A. M. A. for index cards.....	24.80
By cash to Library Bureau, cabinets.....	34.55
By cash to Cleary & Bailey, printing.....	59.59
By cash to THE JOURNAL, subscriptions for 2,643 members	1,982.25

Total	\$3,126.73
By cash balance on hand.....	37.14

Total	\$3,163.87
Approved.	C. H. McCULLY, J. H. WEINSTEIN, C. A. DAUGHERTY, Auditing Committee.

The unpaid bill of the chairman of the publication committee, amounting to \$100, for editing the 1907 transactions is on hand. It has been approved and should be paid by the incoming treasurer.

Respectfully submitted,

ALBERT E. BULSON, JR.,
Treasurer.

Dr. Weinstein moved, seconded by Dr. McCully, that the report be approved, the resignation accepted and that Dr. Bulson be tendered a vote of thanks for his long, faithful and satisfactory service as treasurer of the association. Carried.

The selection of a successor to fill the vacancy resulted in the unanimous election of Dr. D. W. Stevenson, of Richmond.

Moved, seconded and carried that no one who is not a member in good standing in the association be permitted to register at the Terre Haute meeting, and that the secretary be instructed to furnish the registration clerks with a list of the members for verifying title to registration.

The president appointed Drs. Daugherty, Weinstein and McCully as an auditing committee to audit the treasurer's accounts, and they reported that they found the report with attached vouchers correct, and therefore approved the same.

Adjourned.

ALBERT E. BULSON, JR.,
Secretary.

ALLEN COUNTY.

FORT WAYNE MEDICAL SOCIETY.

(Meeting of Dec. 8, 1908.)

Meeting called to order by President Calvin with 44 members present. Program was in charge of Drs. Porter, Wheclock and McCaskey, at Hope Hospital.

CASES BY DR. PORTER.

CASE 1.—Suppurative Peritonitis with Sub-Hepatic Abscess of Appendiceal Origin.—Recovery following secondary operation. The point emphasized was that rectal examination in children is very advantageous for locating collections of pus.

CASE 2.—Suppurative Nephrolithiasis, in Female.—Vaginal cystotomy with subsequent nephrectomy, followed by recovery. Infection in this case had been stinking and widespread.

CASE 3.—Scirrhous Cancer of Breast in a Tuberculous Subject.—Rodman operation for the removal of breast. The interesting feature is the existence of the two lesions in one subject.

CASE 4.—Suprapubic Prostatectomy in Two Stages.—Emphasis was placed upon the necessity of early sitting posture and reasons given for the preference of suprapubic route.

CASES BY DR. WHEELOCK.

CASE 1.—Juvenile Locomotor Ataxia, Subsequently Assuming a Progressive Type.—Defective eyesight dated back for more than ten years. Infantile locomotor ataxia is rather rare, 34 cases in all having been collected.

CASE 2.—Locomotor Ataxia with Complete Loss of Sight in Right; Left Eye One-Tenth Vision.—The tabetic triad, loss of patella reflex, Argyle-Robertson

pupil and Romberg symptoms are present in this case.

CASE 3.—Probable Locomotor Ataxia, Without Presence of Argyle-Robertson Pupil on Right Side.—Romberg symptoms and exaggerated patella reflex present.

CASE 4.—Embolism of Central Artery of Retina Probably of Rheumatic Origin.—History of early acute rheumatic fever and the present existence of an aortic insufficiency.

CASE 5.—Tropho-Neurotic Keratitis.—The pathology is located in the Gasserian ganglion trophic cells.

CASES BY DR. MCASKEY.

CASE 1.—Irritative Lesion in Right Rolandic Area.—Relief followed decompression operation by Dr. Porter, at which lesion found was lepto-meningitis over arm center.

CASE 2.—Probable Localized Cerebritis Originating from Necrosed Tegmen Tympani.—First operation by Dr. Bulson revealed a sinus leading toward the mastoid from the auditory canal. Radical mastoidectomy later showed tegmen tympani broken down. No other localized abscess cavities. Prognosis uncertain.

CASE 3.—Lepto-meningitis of Left Convexity of Brain.—A gross lesion in the region of the arm center being suspected, exploratory operation was made by Dr. Duemling. Findings were an intense lepto-meningitis without any indications of a neoplasm or abscess. Death twenty-four hours later without autopsy.

Discussion by Drs. Bruggeman and Bulson.

Resolution to strike out that part of the by-laws prohibiting agreements and schedules of fees carried.

A motion carried for the appointment of a fee bill committee.

Adjourned to lunch where a vote of thanks was given the hospital management for their entertainment.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Dec. 15, 1908.)

Called to order by President Calvin, with 31 members present. Clinical cases.

Dr. Wheclock. Tuberculosis of Alveolus, Palate and Larynx, and Possibly of Tympanic Cavity.—Tubercle bacilli in scrapings from palatal ulcer and pus from auditory canal. Swab from larynx negative. Primary laryngeal tuberculosis is rare, as is that in the mouth. Not uncommon in tympanic cavity in connection with general tuberculosis.

Discussion by Drs. Bulson, Beall and Calvin.

Further reports were given by Drs. Bulson and Calvin on cases previously presented.

Management of Valvular Disease of the Heart in Children was the title of a paper by Dr. S. E. Mentzer, in which he said that particular stress should be laid on the shortness of breath as a frequent symptom. Sudden deaths from cardiac disease not frequent in children, but complete recovery rare save where lesion is slight. Intercurrent disease frequently fatal. Constant medical supervision and examination essential.

Congenital Heart Disease with case report and post-mortem findings, by Dr. L. T. Rawles. Child two years and four months of age, began to have attacks of marked cyanosis, one week apart at first, later

more frequently. Examination of an attack showed semi-comatose condition, marked cyanosis, lasting about two hours. Normal between attacks. Toes and fingers moderately clubbed. Heart examination, impulse weak, diffuse systolic murmur at base, not transmitted to axilla. Death occurred in an attack.

Postmortem, the heart showed patent foramen ovale and interventricular septum.

Congenital heart disease is infrequent, usually complicated, and occurs oftenest in the right side. (1) Developmental errors, (2) fetal endocarditis, (3) fetal myocarditis, (4) adult endocarditis, developing on congenital defects. The embryology of the heart was reviewed. The causes may be ascribed to arrest of development and to diseases of the fetus in utero. Diagnosis depends on the history and findings. Prognosis as to life unfavorable, though a few live to old age. Treatment hygienic and administration of oxygen during attacks of cyanosis.

Discussion by Drs. Weaver, Van Buskirk, Brugge-
man, Mouser, Gilpin, Morgan, B. Van Sweringen and
Drayer.

Usual honorarium to secretary and janitors allowed. Motion to suspend meeting during holiday week carried.

Application of Dr. Phillips was referred to the Board of Censors.

J. C. WALLACE, Sec.

(Meeting of Dec. 22, 1908.)

Meeting called to order by President Calvin with 27 members present.

Further report on Mastoid and Cerebral Infection. Case reported at previous meeting, was made by Dr. Bulson. Relief from choked disc, squint and partial paralysis followed radical operation.

Anencephalic Monster, with presentation of specimen. Clinical case report by Dr. W. W. Carey. Gestation of seven months terminated in delivery of anencephalic monster, together with increased amount of amniotic fluid.

Hemoptysis was the title of a paper by Dr. E. A. Crull. Blood must come from the lung to be hemoptysis. Most common between the ages of 20 and 24; rare among infants. Essayist questioned the existence of so-called traumatic phthisis. Occasional causes of pulmonary hemorrhages without demonstrable local lesions are epilepsy, meningitis, pulmonary edema and hyperemia, mitral stenosis, gout, arteriosclerosis, progressive pernicious anemia, purpura hemorrhagica, tertiary syphilis, pertussis, malaria, pulmonary gangrene, hepatic cirrhosis, etc. Hemoptysis is an early symptom in one-third of the tuberculous cases. Slight bleeding may come from a bronchial vessel, but profuse ones come from rupture of pulmonary capillaries and arteries, due to the growth of tubercles in the vessel walls. Tuberulin tests should be given in all doubtful cases. Treatment consists in quiet, semi-recumbent posture and morphin grains $\frac{1}{4}$ for temporary control of hemorrhage. Heroic method of 1/10 grain injections of apomorphia in severe cases was mentioned, the indication being that it reduces blood pressure by the vomiting, and the straining renders complete the partially torn vessel, thus allowing it to contract.

Discussion by Drs. B. Van Sweringen, Bulson, Nierman, Gilpin, McOscar, Morgan, Sledd, Rhamy, Drayer and Calvin.

Some Points with Reference to the Value of the Leucocyte Count, as Shown by the Analysis of 300 Miscellaneous Blood Counts, was the title of a paper by Dr. B. W. Rhamy. From the above series of 300 counts analyzed the following conclusions were drawn: A differential count is of more value than a total count. A differential count should always be made in connection with a total count. The total count is an index of the resistance to infection, while the neutrophile count is an index of the amount of toxic absorption. A high neutrophile count with a high total could denote either an acute systemic infection, a gangrenous or a suppurative process. A neutrophile count above 80 per cent. usually means suppuration. A low total or polynuclear count in the presence of severe infection denotes low resistance. An increase of large lymphocytes accompanied by an eosinophilia is presumptive evidence of specific disease in a suspected case. An increase of large lymphocytes and transitional cells, with a decrease of neutrophiles, small lymphocytes and eosinophiles in the presence of a continued fever, warrants a diagnosis of typhoid fever. Transitional cells may be immature neutrophiles or lymphocytes.

Disensation by Drs. Hamilton, Drayer and B. Van Sweringen.

Reports of the following committees were accepted: Public Health and Hygiene, School Buildings, Cooperation with Druggists, Fireworks, Medical Club Building, and Fee Schedule. In accordance with the report of the last named committee a minimum fee table for medical services in Fort Wayne was adopted.

A motion to appoint a committee to draft a credit list was adopted.

A vote of thanks was tendered by the society to the retiring president for his efficient work during the year.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Jan. 5, 1909.)

In the absence of the president and vice-president, Dr. Carey was called on to preside, twenty-four members being present.

Spina Bifida Twins, case report and specimens exhibited by Dr. L. T. Rawles. Complete failure of closure of abdominal wall and consequent exstrophy of abdominal contents, in both fetuses. The feet on one clubbed, one foot on the other fetus clubbed, the knees webbed, and one has a cleft palate.

Discussion by Drs. Duemling, Nierman and Porter.

Cesarean Section on Rachitic Dwarf, with exhibition of radiograph of pelvis and fetal head; case report by Dr. H. A. Duemling. Abdominal Cesarian section, live mother and baby. Progress favorable to date.

Dr. Brudi read report of Porro operation done by Dr. W. H. Myers a number of years ago.

Discussion by Dr. Porter.

Obstruction of the Bowels Due to Strangulation by Meckel's Diverticulum, case report by Dr. Duemling. Twenty-four inches of gut resected. Course favorable to date.

Discussion by Dr. Porter.

Syphilis Without Skin Manifestations was the title of a paper by Dr. H. C. Nierman, in which he called attention to the advance made in bacteriology of the disease and its relation to public health, the advantages and dangers of admonition, and the necessity for accurate statistics. Too much stress should not be placed on the cutaneous manifestations to the ex-

clusion of visceral and nervous lesions. The location of the initial lesion is so constant as to render any other somewhat obscure as a diagnostic measure. More accurate diagnoses have latterly reacted to the benefit of our statistics. Prophylaxis plays an important part. Infection by the organism of this disease paves the way to other diseases both in the patient and his posterity.

Discussion by Drs. G. Van Sweringen, Porter, Gilpin, Morgan, Duemling and Bulson.

Carbunculosis was the title of a paper by Dr. S. P. Henderson, in which he took up the history, pathology, symptomatology, diagnosis and treatment. Particular stress was laid on the injection of carbolic acid into the carbuncle at intervals of three days, combined with the use of echinacea internally.

Discussion by Dr. Gilpin, Rawles, Pulliam, Weaver, Bulson, Nierman and Beall.

Drs. Phillips and Hulbush were elected to membership. Annual reports of the secretary and treasurer were read and referred to the auditing committee, both showing the society to be in a prosperous condition and to have a balance to its credit in the treasury.

Adjourned. J. C. WALLACE, See.

(Meeting of Jan. 12, 1909.)

Society called to order by President Bruggeman, with twenty-nine members present, at the Lutheran Hospital.

Retrodisplacement of the Uterus was the title of a paper by Dr. H. A. Duemling, in which he said that this condition does not occur in animals. The erect posture in the human has something to do with this condition. The retention of stools forces cervix forward and fundus backward. Cervical tears also have their rôle in allowing displacements, and the ligamentum latum may suffer twist and allow this condition. The essayist also spoke on the varicosed condition of ligaments. Retrodeviation generally interferes with conception; should these cases become pregnant they are very liable to abort. In treatment, the pessary is of service, in carefully selected cases, but cases with lacerated cervix and perineum are not suitable for the pessary.

Discussion by Drs. Porter and Nierman.

Hodgkin's Disease, case report by Dr. B. Van Sweringen. Eleven years ago patient had swellings in different parts of the body, and was treated for syphilis without effect. Is improving under x-ray treatment.

Torticollis was the title of a paper by Dr. B. Van Sweringen, in which he said that in spastic cases the surgical procedure most generally resorted to is division of contracted muscle or nerve supplying muscle.

Discussion by Drs. Weaver, Drayer and Porter.

Transmission and Propagation of Tuberculosis was the title of a paper by Dr. Crull, in which he said that other organisms usually precede or accompany the tubercle bacillus and prepare the soil for the tubercle bacillus.

Discussion by Drs. Bruggeman, Drayer, English and Sledd.

Adjourned to luneh, where a vote of thanks was given the hospital management for their entertainment.

Adjourned. J. C. WALLACE, See.

(Meeting of Jan. 19, 1909.)

Society called to order by president, with thirty-two members present.

Delayed Diagnosis of Syphilis.—Clinical case report by Dr. Porter. Gummata in woman, married, passed menopause ten years ago. Has large family; nothing in history. Had lump, tender, on the outer and middle third of clavicle and another at the margin of the scapula. Had pain in the eye and ptosis with blindness in that eye, for which she went to an oculist. Complete paralysis of the motor oculi. Spirochete were found in secretions under microscope. Had been treated by several physicians without true diagnosis being made.

Gonorrhreal Arthritis with Gonorrhreal Femoral Phlebitis and Gonorrhreal Nephritis.—Case report by Dr. G. W. McCaskey.

Elective Cesarean Section was the title of a paper by Dr. M. F. Porter. Dr. Porter spoke of the advantage of the elective Cesarean section over the high forceps version.

Discussion by Drs. Duemling, B. Van Sweringen, Nierman, McOscar, Squires, Morgan, English and closed by Dr. Porter.

Dr. C. E. Barnett gave a report of cases from clinics he had visited abroad, mentioning those of Prof. Eiselsberg, of Vienna, on "Thoracotomy in Evacuum;" Albert-Schönberg, of Hamburg; Robinson (Zuckerkandl's Roentgenologist); Fenwick, of London; Israel, of Berlin, and Freyer, of London.

Discussion by Dr. McOscar, Duemling and Barnett.

Mr. H. Somers addressed the society on "Accououts and Their Classification."

Motion made by Dr. McOscar, seconded and carried that society request Mr. Somers to submit a plan to the committee on delinquents and that the committee report same to the society.

Application of Dr. H. E. Glock reported on favorably by the board of censors, and on motion he was admitted to membership in the society.

Adjourned. J. C. WALLACE, See.

CLAY COUNTY.

The Clay County Medical Society met in regular session January 21. Society called to order by president. The first paper of the session was read by Dr. C. C. Sourwine, on "Syphilis," in which the essayist mentioned briefly the history, pathology, differential diagnosis and treatment. The likeness of lues to leprosy and some forms of tuberculosis was noted. Discussion by Drs. Lambert, Cook, Pierce, Williams and Nussall.

"Ectopic Gestation." Case report and specimen presented by Dr. J. F. Smith. Discussion by Drs. Cook and Dilley.

The next meeting of the society will be held February 21, at which time Dr. Pierce will report on epidemic diphtheria.

Adjourned. G. W. FINLEY, See.

DAVIESS COUNTY.

At the December meeting of the Daviess County Medical Society the following officers were elected: President, C. H. Yenne, Washington; vice-president, O. K. McKittrick, Plainville; secretary-treasurer, T. F. Spink, Washington; delegate, O. K. McKittrick; censor, D. B. Smoot, Washington.

The society decided to forego its annual banquet and have instead a series of public lectures by prominent

members of the profession. Accordingly, Dr. J. N. Hurty lectured on "Tuberculosis" at the People's Theater, January 19, illustrating his lecture with stereopticon views of sanitaria, tents, window tents, etc. He also spoke at the High School in the afternoon. At the meeting of the Medical Society Dr. Hurty read a paper on "The Future Hygiene," and J. P. Simonds, of Indianapolis, read a paper on "Some Enlargements of the Spleen."

The society has long and often considered the subject of building a hospital, but without result until recently. Dr. G. W. Willeford, one of the oldest and most energetic members of the local profession, has led a movement by which the city and county officials will join in fitting up a few rooms for emergency work, and it is thought that out of this a hospital will grow in reasonable time.

Adjourned.

T. F. SPINK, Sec.

GRANT COUNTY.

At the regular meeting of the Grant County Medical Society the secretary was instructed to write the senators and representatives of this county to vote against a proposed amendment introduced by Mr. Fleming, of Fort Wayne, that would weaken the medical practice act.

Dr. O. L. Stout presented an interesting case of supposed tubercular disease of the spine.

Albuminuria of Pregnancy was the title of a talk by Dr. W. A. Fankboner, taking as a basis for his subject the report of a case under his observation for the past eight weeks. The best working hypothesis is based on the theory that the symptom-complex is due to the failure of the mother's kidneys to properly eliminate the kidney waste of her own body and that of the fetus. The classic manifestations: scant urine, albumen, decreased urea, edema, digestive disturbance, disturbed vision and convulsions may occur in many cases. A convulsion may be the first intimation of trouble. A limited application of drugs is helpful. Urge the simple life. A composed nervous system is a great asset. At first rest in bed, if possible, and an exclusive milk diet. Saline laxatives freely. In some cases sweats should be given every day. Diuretics should be given with care if at all. When seen early such cases can usually be tided safely over the confinement period. In some cases the condition may become so serious that it is advisable to induce labor, no difference what the period of gestation.

Adjourned.

O. W. MCQUOWN, Sec.

GREENE COUNTY.

The Greene County Medical Society held its regular meeting, annual banquet and election of officers at Linton, Ind., on January 14. The paper of the evening was by Dr. E. T. Sherwood, on "Tuberculosis."

The election of officers resulted as follows: President, Frank A. Van Sandt; vice-president, A. T. Custer; secretary-treasurer, E. R. Mason; delegate, H. R. Lowder; censors, B. A. Rose, E. T. Sherwood and J. E. Talbott.

A banquet was served by the "Bay View Club," of Linton. Dr. Allen Pierson, of Spencer, and Dr. Fletcher Gardner, of Bloomington, were guests of the society.

Adjourned.

E. R. MASON, Sec.

HOWARD COUNTY.

The regular meeting of the Howard County Medical Society was held January 1, at Kokomo, with a good attendance. Dr. D. C. Peters, of Greentown, read an excellent paper on "Influenza."

Adjourned.

WILL J. MARTIN, Sec.

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A called meeting of the Howard County Medical Society was held January 8 for the purpose of discussing the municipal hospital situation. The offer of the Kokomo Hospital Association, an organization which has for several years held in trust a bequest of the late Mrs. Page, was presented by Dr. W. H. McClurg. The association proposes to give to the city their property known as the Gifford Sanitarium, east of the city, if it be used for hospital purposes. The society decided in favor of the proposition, and a committee was appointed to convey the resolution to the city council. The Kokomo city council has voted an appropriation of \$25,000 for a municipal hospital.

Adjourned.

WILL J. MARTIN, Sec.

HUNTINGTON COUNTY.

The Huntington County Medical Society held its annual banquet and election of officers for 1909 on the evening of Dec. 17, 1908. Prior to the meeting, Dr. Charles H. McCully, councilor of the Eleventh District, addressed the public on the topic of "Twentieth Century Bondage." The banquet was attended by about seventy-five members and guests and was a complete success from every point of view.

The election of officers resulted as follows: President, Dr. E. W. Poinier, Andrews; vice-president, Dr. Ira E. Perry, Bippus; secretary-treasurer, Dr. Maurice H. Krebs, Huntington; censors, Drs. A. H. Shaffer, J. R. Hunter, Huntington, and S. V. Wilking, Roanoke.

Adjourned.

MAURICE H. KREBS, Sec.

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The Huntington County Medical Society met in regular session, Jan. 9, 1909. The members met in order to outline the work for the new year, and other matters of importance were discussed. The report of the program committee was returned for reconsideration and presentation at the next meeting.

Adjourned.

M. H. KREBS, Sec.

KNOX COUNTY.

The Knox County Medical Society met in Vincennes Tuesday evening, January 11, with twenty-four members present. The first paper of the evening was by Dr. L. B. Staley, of Bicknell, on "Pneumonia in Children." Dr. W. H. Davenport reported several cases of tubal pregnancy.

After some discussion in regard to a new fee bill the matter was turned over to the physicians' business association for action.

Adjourned.

CHARLES S. BRYAN, Sec.

KOSCIUSKO COUNTY.

The regular meeting of the Kosciusko County Medical Society was held January 19. Minutes of previous meeting read and approved. Dr. C. C. Dubois presented the first paper of the session, on "Composition and Examination of Urine, taking up nephritic colic. Dr. G. W. Anglin presented a paper on "Uremia and movable kidney." Dr. J. H. Bowser discussed the

subject, "Chronie Parenchymatous and Interstitial Nephritis." Dr. C. W. Burkett, president of the society, read a paper on "The Social and Professional Relations of Physicians," mentioning especially the value of charity, and the curse of jealousy and evil speaking. The essayist said that it is an advantage to a physician to have a social, genial disposition. The Golden Rule applies in medicine as well as elsewhere. When in need of a physician, people will call the one who they think will do his best for their loved ones. Physicians are the only class of people who continuously give away their services. There are three main kinds of charity cases: Honest poor, dishonest poor and drunken dishonest poor. Furthermore, there are dishonest ones who are not confined to the poor. That is, people who are able to but do not pay their physicians. Be charitable and learn the first duty of the physician—secrecy. Do not reveal the secrets which come to you in your professional relations. A good medical society is a kind of educator, something like a postgraduate school, and is next to personal experience. Discussion by Drs. Foster, Long, Howard, Young, Fernier, Burkett and Bash.

The resignation of Dr. J. M. Amiss, Silver Lake, was accepted.

Adjourned.

C. NORMAN HOWARD, Sec.

LAKE COUNTY.

The regular meeting of the Lake County Medical Society was held in Hammond on Thursday, January 7, with twenty-five members present. Minutes of previous meeting read and approved. The applications of Drs. E. R. Gordon, of Hobart, and W. C. Greenwald, of Indiana Harbor, were read, and on the recommendation of the board of censors were elected members of the society.

Dr. H. E. Sharer, of Hammond, brought up the question of asking the State Medical Association to hold a meeting in the county at some future time. A committee was appointed by the president to report on this matter.

Cerebrospinal Meningitis, paper presented by Dr. Fox, with report of three cases. These cases were not the epidemic form, but were due to the colon, or paracolon bacillus. Each case followed an attack of enterocolitis. Case 1, aged 16 months, duration thirty days, with recovery. Case 2, age 6 months, duration two days, fatal. Case 3, aged 10 months, duration forty days, with recovery. Kernig's sign was present in all cases. The temperature ranged from 97 to 104. Lumbar puncture was done in Case 1, but to no avail. The treatment consisted in the use of acetanilid in the early stages, together with fever tablets to control the temperature. Normal salt solution per rectum; ice to the back of head; bromids and chloral as needed, and occasionally a hypodermic of morphin. Mercurial injections were used on the appearance of the tonic spasms. Peptonized milk was used as diet after the first week.

Adjourned.

E. M. SHANKLIN, Sec.

MARION COUNTY.

INDIANAPOLIS MEDICAL SOCIETY.

(Meeting of Nov. 3, 1908.)

Society called to order by President Wynn.

Pernicious Anemia with Recurrent Attacks or Remissions.—Case report by Dr. Theodore Potter. Dis-

tinct history of attack similar to the present one, two years ago, was given, and again one year ago, when diagnosis of pernicious anemia was made by careful blood examination. Under the administration of iron, freshly made meat juice and plentiful fresh air, there was rapid improvement.

Lobar Pneumonia Complicated by Pleurisy, with Effusion Later Becoming Purulent.—Case report by Dr. Potter. The presence of a pleural exudate, serous in character, was proven by exploratory puncture, but owing to the small quantity was not removed. Patient improved. About six weeks later patient taken acutely ill, with septic temperature. About a quart of pus, showing almost pure culture of the pneumococcus, was aspirated, and patient has completely recovered.

Dr. A. C. Kimberlin reported a case of extreme exfoliating dermatitis, which he believes could be traced to an intense intestinal toxemia.

Dr. T. B. Noble reported: Case 1.—A patient who showed extreme vitality and endurance. Following delivery this patient had puerperal infection, demanding a panhysterectomy. In ten days she developed a phlebitis of the right leg. Twenty days after the operation a septic pneumonia developed. Fifteen days after, all the symptoms of acute obstruction of the bowel came up, and patient was operated. Following this the patient made an uneventful recovery.

Case 2.—Acute obstruction of bowels. Patient died before reaching hospital.

CASE 3.—Violent erythema, thought by the author to be due to the ether used in anesthesia.

Adjourned.

R. H. RITTER, Sec.

(Meeting of Nov. 10, 1908.)

Society called to order in the hall of the German House by the president. As its guests the society had the National Association for the Study of Epilepsy and the Care and Treatment of the Epileptic. At the conclusion of the program and discussion a series of biograph films showing the convulsions and motions of epileptics were shown.

Adjourned.

R. H. RITTER, Sec.

(Meeting of Nov. 17, 1908.)

Called to order by President Wynn. Secretary read a letter from Dr. McCormack, of Kentucky, calling attention to the prospect of establishing a national health department.

Legal Responsibilities of the Insane was the title of a paper by Dr. A. E. Sterne.

Juvenile Responsibility was the title of a paper by Dr. W. D. Hoskins.

Discussion by Drs. C. E. Cottingham, J. A. McDonald, B. D. Myers and E. C. Reyer.

Adjourned.

R. H. RITTER, Sec.

(Meeting of Nov. 24, 1908.)

Called to order by President Wynn. Secretary read a letter from President Bryan, of the Indiana University, offering the use of the library of the Indiana Medical College building for the meetings of the society. The offer was accepted.

A Resumé of Some Recent Investigations on Typhoid Fever in Indiana was the title of a paper by Dr. Helen Knabe, in which she said that she believed personal contact is responsible for more cases of typhoid

infection than is generally believed, and also that more attention should be given to the disinfection of excreta. Flies are responsible for the spread of the infection.

Education and Its Relation to the Social Evil was the title of a paper by Dr. A. S. Jaeger, in which he said that education must be pushed, as all other means of limiting or eradicating these diseases have utterly failed. People must be taught that the lessening of social diseases depends not so much on the fear of legal or religious punishment as on a strict observance of personal hygiene and rectitude. The responsibility for this instruction rests largely upon the medical profession.

Discussion by Dr. T. V. Keene, C. R. Sowder, R. H. Ritter, T. B. Eastman, W. D. Hoskins, Goethe Link, D. G. V. Woollen, John Kilmer, A. W. Brayton and Prof. G. W. Benton, principal of Shortridge High School.

Adjourned.

R. H. RITTER, Sec.

MIAMI COUNTY.

The Miami County Medical Society met in regular session December 29, with seventeen members and one visitor present. Amendments to bylaws offered at previous meeting were placed on reading for passage, with the result that only one of the three was passed. Dr. Carter moved that the committee on bylaws be instructed to procure 100 printed copies of the Principles of Ethics of the American Medical Association.

The Male Generative Organs was the title of a paper by Dr. O. U. Carl, of Peru.

After this paper the society adjourned to Bears' Hotel parlors, where a supper was served to the doctors and their families, followed by a very interesting social program.

Adjourned.

D. C. RIDENOUR, Sec.

* * *

The Miami County Medical Society met in regular session January 29. Meeting called to order by the president, with thirteen members and one visitor present. Drs. Carter and John Spooner spoke in behalf of the District Meeting of the Eleventh Councilor District Medical Society, to be held in May at Marion, and urged a good attendance.

Prostatic Cystitis was the title of the paper of the session, by Dr. W. N. Wishard, of Indianapolis. The author gave special attention to the palliative treatment of this condition. Dr. Carter moved a vote of thanks to Dr. Wishard. Carried.

Adjourned.

D. C. RIDENOUR, Sec.

OWEN COUNTY.

The regular meeting of the Owen County Medical Society was held at Spencer January 22. In addition to the other papers on the program, Dr. W. F. Hughes read a paper, by special invitation, on "The Etiology and Treatment of Strabismus." Dr. Hughes was formerly a member of this society.

The election of officers resulted as follows: President, John N. Sloan; vice-president, H. A. Fox; secretary, Allen Pierson; censors, Thos. Gants, R. R. Coble and R. C. Holtzman; delegate, N. D. Cox.

Dr. R. R. Coble, the retiring president, delivered an address.

Adjourned.

ALLEN PIERSON, Sec.

PORTER COUNTY.

At the regular meeting of the Porter County Medical Society, held December 1, the following officers were elected: President, E. H. Powell; vice-president, J. F. Take; secretary-treasurer, G. R. Douglas.

Following the election of officers, Dr. A. P. Letherman read a paper on "Pneumonia."

Adjourned.

G. R. DOUGLAS, Sec.

RIPLEY COUNTY.

At the last meeting of the Ripley County Medical Society the following officers were elected: President, M. Joseph Coomes, Batesville; vice-president, H. T. Olmsted, Versailles; secretary-treasurer, Bine Whitlatch, Piercerville; alternate delegate, T. R. Pate, Milan; censor, C. E. Holton, Holton, Ind.

Adjourned.

BINE WHITLATCH, Sec.

SCOTT COUNTY.

The regular meeting of the Scott County Medical Society was held December 29 for the annual election of officers. The election resulted as follows: President, Dr. H. P. Kendall; vice-president, Dr. W. L. McClain; secretary, Dr. T. E. Biery; censors, Drs. J. M. Sample, J. P. Wilson and C. E. Hawn.

Dr. Levi McClain reported a case of gunshot wound of the heel of a boy while hunting, the heel being shattered. In a short time gangrene set in, and amputation above the knee was performed, which was followed by tetanus. Antitetanic serum was used, but with no relief, and death ensued quickly. This case emphasizes the fact that all such wounds should be treated at once with antitetanic serum, for it is doubtful if amputation would prevent tetanus even if done within a few hours after inoculation. The boy was a tobacco fiend, which might have impaired the circulation of the blood, causing gangrene.

Dr. Kendall and Dr. Levi McClain also reported cases.

Adjourned.

T. E. BIERY, Sec.

SPENCER COUNTY.

The Spencer County Medical Society met in regular session at Rockport, January 19, with president Gwaltney in the chair. Minutes of previous meeting read and approved.

Dr. C. H. Adye presented a case of purpura, which was very interesting. The patient was placed on treatment, a report of the condition to be made at the next meeting. The subject of the evening was "Diphtheria," which was discussed by Drs. Adye, White, Harter, McClary and Allenbaugh.

Adjourned.

H. Q. WHITE, Sec.

SULLIVAN COUNTY.

The Sullivan County Medical Society met in regular session January 1, at the Davis Hotel, Sullivan, with eleven members present.

The papers of the evening were by Drs. H. E. Bland, on "Tonsillitis," and C. F. Briggs, on "Eye Strain."

The election of officers resulted as follows: President, E. M. Deputy; vice-president, E. M. Corbin; secretary, T. B. McBride.

A referendum vote will be taken, changing the time of meeting of the Sullivan County Medical Society from quarterly to monthly meetings, and from afternoon to evening.

Adjourned.

F. B. McBRIDE, Sec.

VIGO COUNTY.

(Meeting of Jan. 5, 1909.)

The annual banquet of the Vigo County Medical Society was held January 5 in honor of the retiring president, Dr. B. V. Caffee. After the menu had received due attention the members were further entertained by a debate upon the question, "Who has the hardest time, the city or the country doctor?" Drs. Stunkard and Schell spoke for the former, and Drs. Givens and Louks advocated the latter. Following this was a mock trial of the specialist, Dr. W. R. Mattox acting as judge, and Drs. Bloomer and Gillum being the opposing counsels. A number of witnesses were called to testify as to what they had suffered from the hands of the specialist. Attendance, fifty-three.

Adjourned.

CHARLES N. COMBS, Sec.

(Meeting of Jan. 12, 1909.)

At the meeting of January 12 Dr. Joseph H. Weinstein lectured on "Diseases of the Hip." Dr. J. E. Donnelly, having entered into a contract with the Modern American Lodge to give unlimited services for a fixed compensation, was declared to have forfeited his membership in the society. The president ruled him out, the decision of the chair was upheld and the secretary was ordered to refund his dues.

Adjourned.

CHARLES N. COMBS, Sec.

(Meeting of Jan. 19, 1909.)

Dr. Walker Schell talked on "Dislocation" at the meeting of January 19. A discussion ensued concerning the existing by-law prohibiting lodge practice. The present wording allows a member to do this work, provided he gets the regular fee, and it was thought wise to amend this by penalizing all forms of lodge practice.

Adjourned.

CHARLES N. COMBS, Sec.

(Meeting of Jan. 26, 1909.)

At the meeting of January 26 the society entertained Dr. T. J. Beasley, medical director of the Rockwood Tuberculosis Sanitarium. Dr. Beasley presented a thorough study of the diagnostic uses of tuberculin. As a graphic illustration of his lecture, the doctor showed a patient who was at the time reacting from the ocular scarification and inunction tests.

Adjourned.

CHARLES N. COMBS, Sec.

WABASH COUNTY.

At the regular monthly meeting of the Wabash County Medical Society, Nov. 25, 1908, the following officers were elected for the year 1909: President, G. M. LaSelle, Wabash; vice-president, G. D. Balsbaugh, North Manchester; secretary-treasurer, L. E. Jewett, Wabash; censors, G. E. Snearley, Roann; P. G. Moore, Wabash, and Emma G. Holloway, North Manchester.

The election of officers was followed by a paper entitled "Medical Diseases Complicating Pregnancy," by Dr. W. A. Domer, of Wabash. The discussion was opened by Dr. C. L. Dicken, La Fontaine.

Adjourned.

L. E. JEWETT, Sec.

BOOK REVIEWS

EMERGENCY SURGERY. By John W. Sluss, A.M., M.D., Professor of Anatomy, Indiana University School of Medicine. 695 pages; 584 illustrations. Flexible leather, \$3.50. Philadelphia: P. Blakiston's Son & Co., 1908.

This is a very practical but comprehensive manual prepared especially for the use of the general practitioner. It is not an exhaustive treatise and yet it is sufficiently complete to meet all the requirements of any physician called upon to do emergency surgery. One of the distinctive features of the work is the conciseness of the descriptions and the abundance of good illustrations, which very materially aid in a ready and proper understanding of the text. The work also represents the latest and most approved methods and practices. In short, the book is an excellent example of the ready reference manuals of convenient size and quality which are so deservedly popular with busy physicians.

DISEASES OF THE SKIN AND THE ERUPTIVE FEVERS. By Jay Frank Sehamburg, M.D., Professor of Dermatology and Infectious Eruptive Diseases in the Philadelphia Polyclinic and College for Graduates in Medicine. Octavo of 534 pages, illustrated. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$3.00 net.

A work of this sort is certain to meet warm welcome at the hands of the general practitioner, as well as the dermatologist and pediatrician. Combining as it does a consideration of the exanthemata with the ordinary dermatoses, especially as relates to their skin manifestations, it is destined to fill a long felt want.

A little surprise is to be felt that in the treatment of urticaria so useful a remedy as calomel, in the form of the lactate or chlorid, is not mentioned, although the pathology of the lesion as described by the author would distinctly indicate such an agent.

It is interesting to note that no mention is made in this text of the so-called Duke's fourth disease, and, perhaps, very properly so, inasmuch as the majority of the evidence seems to be in favor of classifying it as a mild form of some one of the other three exanthemata.

BORDERLAND STUDIES. By George M. Gould, M.D. Volume 2; pages, 300. Cloth, \$1.00. Philadelphia: P. Blakiston's Son & Co., 1908.

This is a volume of miscellaneous addresses and essays pertaining to medicine and the medical profession, and their relation to general science and thought. One of the most interesting chapters is that on "The History of the House," in which is discussed the relation of architecture and its evils to such diseases as tuberculosis, pneumonia, yellow fever, malaria, typhoid and many other types of ill health, and to the educational and moral standards of our people. The chapters on "The Seven Deadly Sins of Civilization," "Disease and Sin," and "The Life Study of Patients," are also interesting and instructive from a medical point of view. The other chapters bearing upon ethics, morality, education and some of the virtues and vices are all presented in a manner which make them entertaining for leisure reading. Some of the pungent criticisms of prevailing medical ethics and practice might in good taste have been omitted, even though they add spice to the text.

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ORIGINAL ARTICLES

SOME RECENT STUDIES ON THE ETIOLOGY OF CHOREA.*

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Chorea is a disease which has been recognized from the earliest antiquity when it was attributed to the presence of a demon, but until recently its real etiology and pathology have been obscure. Not that it has been carelessly and insufficiently studied — for its apparently abrupt onset and striking manifestations have naturally attracted the attention of medical men.

From the earliest investigations which may be said to have scientific value — those beginning about twenty years ago (in 1887, Dr. Mantle) a few men have expressed very definite and positive convictions as to its cause and relations. These expressions, however, attracted but little attention and were apparently regarded by the profession generally as the theories of idle speculation or the erratic deductions of enthusiastic bacteriologists.

The main body of the profession maintains to this day that it is a functional disease whose cause is obscure and whose lesions, if it has any, are inconstant. A brief review of the history of these investigations may be interesting and instructive.

The study of etiology of chorea is so interwoven with that of rheumatism that we must of necessity consider them together. This will certainly not detract from but only increase the interest and importance of the study.

It is soon apparent that the English physicians have for years given more weight to the theory

of a relation between rheumatism and chorea than have the physicians of the United States. This is true also of the theory of the relation between tonsillitis and rheumatism, the clinical importance of "angina faucium," as they call it, having long been recognized as a frequent occurrence in rheumatism.

As early as 1880 Kingston Fowler published in the London *Lancet* a report of twenty cases of acute rheumatism ushered in by tonsillitis.

Seven years later, or in 1887, Dr. Mantle published (*British Med. Jour.*, 1887, vol. 1, p. 1381) an article of much more significance on the etiology of rheumatism from a bacteriological point of view. This, so far as I can determine, is the first report of any systematic, scientific investigation of the bacteriology of rheumatism.

This report attracted little attention, for when in 1900 (thirteen years later) Poynton and Paine published their first report they acknowledged that they were not aware of the work previously done by Dr. Mantle. From this report we learn that Dr. Mantle isolated from the knee joints of eight cases of rheumatism a micro-organism occurring sometimes as a diplococcus and sometimes as a small bacillus, each time, however, in pure culture. No animal experiments were made. The author admits that these animal inoculations alone could determine that this organism was the specific cause. It seems that he fully realized the probability of rheumatism being due to an infection, and also from his previous report its *relation to tonsillitis*, if not its tonsillar origin.

In 1894 Dana published (*American Jour. Med. Sc.*, p. 31) a report of the isolation of a diplococcus from a case of chorea following rheumatism. The organism was found in the meninges of the brain and spinal cord.

* Read before the Indiana State Medical Association at French Lick, June 19, 1908.

In 1898 Triboulet secured what was then a remarkable result by injecting a diplococcus isolated from a case of rheumatism into a rabbit, which developed after twenty days valvular disease, pleural effusions and pericarditis, but no joint symptoms. The organisms recovered, corresponded accurately with those recovered from other cases of rheumatism. In spite of the absence of joint symptoms, Triboulet concluded that this diplococcus was the specific organism and cause of rheumatism. Striking as these results were, judging from these alone, we would probably be justified in regarding his conclusions as unwarranted, or at least not proven.

In 1899 (*Berlin Klin. Wochenschrift* No. 29, p. 638) Wasserman and Mulkoff isolated from the brain in a fatal case of chorea following acute rheumatism a diplococcus which when inoculated into rabbits produced fever and multiple arthritis in a series of eighty cases. The micro-organism was found in the joint exudate, and cultures from these animals reproduced the disease in other animals. Wasserman considered it the specific cause of rheumatic fever.

On Sept. 22, 1900, in the London *Lancet*, p. 861 to 935, Poynton and Paine, two London physicians, published the first of a series of reports, which will in time, if they are not now, be regarded as epoch-making. The researches of these men have been so careful and painstaking, the scope and volume of their work so large, their deductions so logical, and their claims so modest, that their conclusions demand our thoughtful attention and consideration.

The result of these extensive examinations of patients ill with rheumatism and chorea was as follows:

1. Diplococci were obtained from the blood of the living patient with acute rheumatic pericarditis.
2. From the throat of living patient with rheumatic tonsillitis.
3. From the granulations from the cardiac valves after death.
4. From the pericardial fluid.

The diplococci obtained from the various sources were injected into rabbits and pure cultures recovered from joint exudates, heart's blood, urine and cerebrospinal fluid.

In view of such finding we note with some surprise their statement that "we have no personal knowledge of the diplococci in the joints of human beings." It remained for another investigator to explain the significance of this.

From a patient dead from violent chorea in whom the movements were severe but the heart little affected, they demonstrated numerous dip-

lococci in the perivasicular lymph spaces of the pia mater, in its capillaries, and also in some parts of the motor area of the brain. In another case of chorea very similar to the above diplococci were demonstrated in the mitral valves.

As one result of their research they were led to offer the following very interesting and plausible explanation for the well-known variations in the type of rheumatism and chorea (ranging, as it does, from the mildest to the most malignant form). They suggest that the clue to this variation is found in the distribution and behavior of the diplococci in the cardiac valves. In simple or mild cases the diplococci are not found on the surface of the valves, and the disease tending as it does to recovery, the organisms are destroyed by phagocytosis.

In the malignant type the diplococci reach the free surface and there apparently multiply with great rapidity, for they are found in large masses. If these are detached by the blood stream they may possibly give rise to a condition of rheumatic septicemia, i. e., clinically malignant endocarditis. Why the diplococci should overstep the barrier of the endocardium in this way we do not know, but it is suggested that the valves have been already injured by previous attacks of rheumatism and chorea, and also that the patient is usually in feeble health at the time of the final infection. The report closes with this conservative statement: "It is probable that there is a close association between rheumatic chorea and the occurrence of diplococci in the brain and its membranes."

The opinion is also expressed that the frequency of the occurrence of chorea in childhood depends upon the more extensive dissemination of the micro-organisms in the young, as pointed by the clinical manifestations of the disease at this age. That chorea should be common in children and rare in adults is in accord with what is found in many infections: the child is less resistant to them than the adult and the manifestations are more variable and widespread (*Lancet*, 1901, May 4, p. 1264).

In 1901 Meyer, a German investigator, reported some very ingenious, elaborate and interesting studies. He, like several other investigators, was disappointed so often in failing to find the organism associated with rheumatism in the very place where one would naturally expect to find it in greatest numbers, that is, in the exudate of the inflamed joint. He was also frequently unable to isolate it from the circulating blood. However, with true German persistency he determined to find the reason. He was apparently familiar with the clinical association of

rheumatism with tonsillitis, for from the tonsils of these cases he succeeded in isolating this same characteristic diplococcus. Injecting it in pure cultures into rabbits he produced the typical evidence of rheumatism, i. e., multiple arthritis with suppuration, endocarditis, pericarditis and myocarditis, incoordinate muscular movements, etc. He completed the evidence by isolating from the various tissues of these animals the same organism in pure culture.

The absence or scarcity of the organism in the joint exudate he explained by demonstrating the occurrence of a marked leucocytosis about the synovial membrane of the inflamed joints.

In 1905 Poynton and Payne (*Lancet*, vol. 2, p. 1760) reported another group of some three or four cases of chorea very carefully and fully investigated, and made some interesting observations. They attribute to the diplococcus rheumaticus the following peculiarities:

1. Morphologically minute and smaller than the streptococcus pyogenes.
2. It causes an earlier and greater production of acid than the streptococcus pyogenes and will grow in a filtrated culture of that organism.
3. Experimentally rabbits are more resistant and arthritis and endocarditis are much more constant.
4. It is difficult to raise the virulence.
5. They never produce abscess in the heart wall, kidney, spleen and liver.

In considering whether chorea is a result of a local lesion comparable to other local rheumatic lesions, or is the result of the action of a general rheumatic poison on the delicate nervous tissues, they are inclined to the view that chorea is the result of numerous slight local lesions—small focal lesions external to the blood capillaries, caused by the escape of the diplococci.

The local changes around the capillaries might cause hemorrhage, thrombosis, perivascular exudation, and in chronic cases perivascular fibrosis. It would be expected that the pia mater would be definitely affected in chorea because of its analogy to other serous membranes and because of an enormous number of minute blood vessels in the membranes.

If, on the other hand, a general systemic poisoning is responsible for chorea, we almost despair of getting any nearer to the solution of the problem until the chemistry of rheumatism is elucidated, for these general systemic poisonings are beyond the reach of morbid anatomy.

In three consecutive cases dead from chorea diplococci were demonstrated in the pia mater in the neighborhood of the capillary blood vessels. This does, as they modestly claim, add one more

link to the chain of evidence. It is rendered more suggestive because of the discovery of the same organism similarly distributed in the pia mater of an inoculated rabbit which showed twitching movements.

In summarizing they are led to hold that there is a great infective process—the rheumatic—to be placed among that series of infective processes where the staphylococcus, streptococcus, pneumococcus and gonococcus are to be found, and that the infective agent is a diplococcus possessing some peculiar characteristics.

They are led to believe that eventually rheumatic chorea will be proven to be a local infection of the nervous system, and that some of its symptoms are the result of a slight meningoencephalitis and possibly a meningomyelitis. The reasons for this belief are summarized as follows:

1. In four cases of fatal rheumatism, in three of which there was chorea at the time of death, the diplococcus was isolated and cultivated from the cerebrospinal fluid.
2. Injecting the diplococcus into rabbits produced twitching movements, arthritis, pericarditis and endocarditis.
3. From these fatal cases of chorea the diplococcus was demonstrated three times in the cerebral pia mater and once in the brain.
4. In the rabbit that showed the twitching movements the organisms were demonstrated in the brain and pia mater.

Good photographs are printed showing the diplococci in the pia mater of a case of chorea and also in the cerebrospinal fluid of a case dying of meningitis in rheumatic fever.

The pathology of chorea has heretofore been almost as obscure as its etiology. Any reports which tend to throw light on the character of the lesions present will be a welcome addition to our knowledge. It is doubly welcome when it comes in connection with, and in verification of, evidences of a definite etiology. In October, 1906, Poynton and Payne published (*Lancet*, Oct. 13, 1906, vol. 2, p. 982) a report of their study of three additional cases of chorea. Two of them were severe cases of ordinary chorea, developing while the cases were under observation for rheumatism with cardiac involvement. The third was a case of the chorea of pregnancy in a young primipara.

Each of these verified the findings in the previous cases, that is, there were present diplococci in the pia mater and in the brain tissue, or, rather, the perivascular spaces and connective tissues.

MACROSCOPIC OF GROSS PATHOLOGY.

The vessels of the meninges and cortex appeared much engorged, those of the base of the brain less so. No exudation, or other signs of inflammation, were visible to the naked eye, except several small hemorrhages beneath the pia mater on the convexity of the hemispheres.

MICROSCOPICALLY.

Stained sections showed great engorgement of the blood vessels of the brain and meninges, with small hemorrhages on the under surface of the pia mater. A few (small arteries) of the pia arachnoid over the convexity of the hemispheres were thrombosed. There were serous exudations and small round-cell infiltration into the membranes in the immediate neighborhood of a vessel. Thrombosed vessels were still more common in the cortex and subcortical white matter.

Recent thrombi were occasionally surrounded by patches of softening, usually in the deeper layer of the cortex. The tissue destruction was never complete. Small round-cell infiltration into sheaths and perivascular spaces was equally marked over the whole hemisphere, whether thrombosed or not. In the lower brain, in cerebellum, pons and medulla, only congestion with some round-cell infiltration was present—no necrosis. In the brain cells themselves great changes were found over the whole cerebral cortex where principally all cells were affected. These cells were found to be swollen, distended, their tigroid tissue diminished, staining diffusely or almost uniformly.

The nuclei stained deeper than normal. In the large Betz cells there was only slight chromatolysis immediately around the nucleus, where the Nissl bodies were broken up into a deeply-staining granular material. A more normal condition was present at the periphery of the cell and in the dendrites. A few cells were so nearly destroyed that their outlines were scarcely recognizable, the nuclei were shrunken and deformed, and no staining substance visible. All over the brain much the same condition of the cells existed. It is suggested here that possibly even more delicate changes occur in the brain cells leading to immediate or remote psychic changes which affect the character and intellectual development of the child.

The autopsy of the case of chorea of pregnancy with previous history of rheumatism showed the mitral valves with early vegetations identical with the other cases.

The brain and meningeal changes were similar to the other cases of chorea, except that there

was less thrombosis. The involvement of the nerve cells was considerably greater.

The explanation of the predominant affection of the motor system in chorea is probably that it is the system that reacts most readily to the excitation. The adolescent brain is notably more unstable than that of the adult.

Since 1896 I have regarded tonsillitis as so frequently a rheumatic manifestation that I have treated it as such with satisfactory results. For the past three years I have treated chorea as cerebral rheumatism, with the result, I think, of shortening the acute stage and lessening complications.

Before closing this paper, which has dealt almost entirely with the bacteriological and pathological studies of rheumatism and chorea, it might be well to inquire what has been the tendency of medical belief and teaching on this subject as the result of purely clinical methods as to

1. The relation of rheumatism and chorea.
2. The probability of it being a specific infection having a definite bacterial origin.

This inquiry would cover, first, bedside study, critical observations of the mode of onset, subjective and objective symptoms, course and duration of illness, complications, relapses, effects of treatment, etc; second, statistical investigations of family and personal history, such as previous attacks of tonsillitis, rheumatism and chorea, and whether a rheumatic history in these cases is merely a coincidence or a different manifestation of a common specific infection.

Osler states that he finds cardiac lesions in 50 per cent. of cases recovering from chorea. Duckworth states that his statistics show a family history of rheumatism in 85 per cent. of cases of chorea.

With increased critical observation or possibly the stimulus of a new point of view, we may note more or stronger analogies to other infectious processes.

It seems that from purely clinical reasoning the general profession has been moving toward the idea that rheumatism and chorea are acute infectious processes.

One eminent author and careful observer has said that the evidence of the rheumatic nature of chorea is stronger from the clinical than from the bacteriological side. Such thinkers maintain that chorea may be the sole evidence of rheumatism. Experience has shown that it may be the earliest, a coincident, or a late manifestation of rheumatism. The bulk of the evidence seems to favor the view that when chorea appears without any history of rheumatism it is presumably the primary symptom.

The tendency in chorea to relapse and recur is explained the same as in rheumatism or any other infection, for that matter; namely, that it is either a fresh outbreak of a slumbering infection or a fresh infection has occurred.

As a result of these studies it seems to me to be a safe and logical conclusion that:

1. The causation of chorea is to be found in the action of bacterial poisons on the brain.

2. The available evidence points to the occurrence of a local infection to which these widespread changes in the nervous system are due.

3. We believe that the infection is of a rheumatic nature and is due to a specific organism—the *Diplococcus rheumaticus*.

TUBERCULIN THERAPY.*

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Empiricism in the treatment of tuberculosis is fast becoming an obsolete thing. The day has passed when a physician can claim that certain drugs, or combination of drugs, will produce a cure in tuberculosis. This state of affairs has brought about a marked change in the therapeutics of this disease in the last ten years, and the modern physician does not attempt the administration of obnoxious and disgusting incompatibles purely upon an empirical basis.

Laboratory methods and laboratory technic have developed to such a state of perfection, assisted by biological agencies, that haphazard and careless findings are no longer tolerated by any physician of the present day. There are, however, certain limitations in laboratory research and laboratory results which must be accounted for and taken into consideration by the wise physician before absolute findings are pronounced.

A positive finding is conclusive, but not so with a negative finding. In tuberculosis the finding of the specific organism is final, and further study only determines the extent of the process. A negative finding does not carry with it any such conclusive evidence and calls for repeated examinations before even approximate results are determined. This being true, when dealing with the specific agent which produces the disease, how much more careful must we move when manipulating the products of these organisms.

The average physician looks upon a laboratory finding as a verdict from which no appeal can be made. In the majority of instances this prob-

ably is true; but, on the other hand, many instances are presented where such a belief is erroneous and would lead to disastrous results. Such was the result of the laboratory finding of Professor Koch with regard to tuberculin and tuberculin therapy. He was forced to present his findings to the world before he had worked them out in detail for himself, and great damage resulted therefrom, and tuberculin received an unwarranted setback by the ignorant application of his theory.

It has taken years of hard labor to place tuberculin in the position with the general physician as Koch undoubtedly saw it when he described his tuberculin and tuberculin therapy in 1890. The trouble was then, as it is at the present time, that the majority who are attempting the use of tuberculin do not understand the reactions which take place in an individual who is subjected to doses of a biological product as strong and powerful as any of the tubercular products which we now have at our command. The safe use of such a product requires an accurate and absolute knowledge (so far as we know it) of immunity, and the various problems which constitute immunization, from a passive or acquired standpoint. Tuberculin differs greatly in its action upon the body from antitoxin or any antibody which may be injected for the relief of a toxic product, corresponding with the toxins of tetanus, diphtheria, etc.

The action of tuberculin is almost directly opposite to the action of antitoxin, because we introduce toxin the same as is already being produced in the tissue, by the growth of the tubercle bacilli, while with antitoxin we use a substance which, by its own action, neutralizes the toxin which is being produced by the growth of bacteria in the body.

The aim in introducing tuberculin into the body is to stimulate a greater production of antibodies in the circulation as well as in the tissue surrounding the tubercular process. The tubercle bacillus belongs to that class of bacteria whose toxins remain inherent in the body of the bacillus during its active reproductive stage and life. It is only after the liberation of these toxins by the death of the bacillus that we get them circulating in the blood, where the protective substances can act upon them and produce antibodies, or at least toxoid bodies. Therefore, when we inject tuberculin we inject a poison which may overcome the body and produce an active congestion which will result disastrously to our patient, because no substance is in the body in a sufficient amount to counteract immediately all of the toxins introduced, and the free toxins immediately act upon

* Read before the Indiana State Medical Society at French Lick, June 18, 1908.

the depleted cells surrounding the tubercular area and destroy them, liberating great masses of active tubercular products to be carried by the lymph stream or the circulation to set up new foci in distant parts of the organism.

The stimulation of these protective bodies in tuberculosis is, to a certain extent, handicapped because of the absence of an active leucocytosis in this disease. In infection generally there is a local accumulation of antibodies and bacteriolysins which protect the tissue from great destruction and also promote healing. This is usually accompanied by a polymorphonuclear neutrophile leucocytosis, the positive chemotactic substances stimulating ameboid activity of the leucocyte and its escape from the bone marrow into the blood stream. This leucocytosis is productive of great good to the infected individual for various reasons. First, it brings into the field a greater supply of leucocytes from which many of the important antitoxic and opsonic substances are derived. Second, the production of fresh and active leucocytes takes place to compensate for those destroyed or injured by inflammation, suppuration, etc. There is an undoubted increase in the resistance of the individual from a leucocytosis, which may be observed by the artificial stimulation of a leucocytosis by the introduction of various saline solutions which are commonly used.

In certain other infections a leucopenia is the rule, and we assume a negative chémotactic substance or the absence of a positive chemotactic influence which does not call forth a leucocyte product. This condition is markedly illustrated in uncomplicated tuberculosis. The increased resistance and reconstructive power attributed to the tissue which is surrounded by marked leucocytosis is, therefore, to a certain extent at least, wanting in tuberculosis. This of necessity, owing to the theory of opsonic power associated with leucocytosis, certainly militates against the body in tuberculosis and renders it more vulnerable to an extension of this process.

The production of antibodies in tuberculosis is much slower than that which takes place in the ordinary infection, because these bodies must be manufactured from the cells immediately surrounding the tubercular mass and those in direct contact with the toxins of the tubercle bacillus. Consequently the production of antituberculin is so slow that the body is not rendered immune to tuberculosis by its own effort, as is ordinarily observed in the production of acquired immunity. This, then, results disastrously to the patient when a rapid breaking down of the tubercular process takes place, when large quantities of tox-

ins are thrown into the circulation by rapidly disseminating tubercular processes.

The aim with tuberculin is to furnish a sufficient quantity of the toxic products of the bacilli to cause an artificial production of amoebocytes by stimulating other cells than those immediately surrounding the tubercle formation, thereby supplying a greater number of antibodies than is required for the neutralization of the toxins, which are slowly elaborated by the tubercle forming areas and supplying the body with a varying grade of immunization. These antibodies produce this immunization through the agencies of new agglutinants, antituberculins and opsonins.

It is, therefore, plain to the clinician that the amount of tuberculin used in the production of this artificial stimulation must be accurately gauged and the results as accurately observed if we do not throw into the circulation an excess of toxin which would produce an acute disturbance similar to the liberation of large numbers of tubercle bacilli as in acute miliary tuberculosis.

There are two principal methods in vogue at the present time for determining the amount of dosage and the length of interval between each dosage, viz., the opsonic index, and the clinical method as practiced by Trudeau and other American clinicians. There are several objections put forth with regard to the opsonic index in tuberculosis by the general class of physicians who are attempting its use. The most important objection is with regard to the extensive laboratory preparations and technic necessary to obtain an opsonic index, it being necessary to obtain an index to determine the negative and positive stage of the reaction. This requires an enormous amount of work, which is fraught, according to a great many eminent men, with a considerable variation in the result, some placing this variation as high as 50 per cent. on either side of the scale. (Sir A. Wright, in his defense of the opsonic index, maintains that such a percentage of error is due to faulty technie rather than to a fault of the theory of the development of opsonic activity in the individual. He maintains that it is possible for different men, working in the same laboratory, upon the same patient, to obtain results within 5 per cent. of each other. This claim he has repeatedly demonstrated in his own laboratory, where the work is carried on by students.) They maintain that such a variation does not give a better indication than that which is observed by the clinical method. In defense of the opsonic index in tuberculosis I wish to say that it has taught us the value of tuberculin and demonstrated to us the amount of tuberculin

necessary to produce immunization, which amount is vastly smaller than was originally supposed to be required. The opsonic index also furnishes us with an accurate scientific theory and demonstration of the activity of the individual toward certain toxic bodies which are producing the disturbance, and furnishes us with an accurate guide to the amount of immunization which we are able to stimulate by the introduction of these toxins or vaccines.

The indications of a reaction, as determined by the clinical method, resolve themselves into a careful and accurate observation of all the symptoms produced by the injection of tuberculin, viz.: temperature, pulse, respiration, local and systemic reaction, degree of cough, amount of expectoration, and the increase in the symptoms of the localized tubercular area. Also the careful observation of the patient's general feeling, such as increased malaise, loss of appetite, and a worn-out, tired feeling. If these symptoms are greatly increased and do not return to the previous normal condition within forty-eight hours the inference is that our dose has been too large for the patient. If we increase the tuberculin while such conditions are present we will stimulate a hypersusceptibility to the drug, or we will increase the tubercular process by causing a disintegration of the barriers with which Nature has surrounded these tubercular areas. The observation of temperature furnishes us a remarkable guide to the size of our dose as well as to the amount of immunity which we are gradually establishing. Rosenberg reports that that good-for-nothing feeling is a better guide to excessive doses than the temperature chart, for the reason that a fever in tuberculosis does not necessarily mean a rise above 98½ degrees.

With the opsonic index we are able to determine more accurately the initial dose of tuberculin in any given period. Once the dose has been determined and the amount of reaction noted, the future treatment resolves itself into a gradual increase of the dose until we have arrived at a dose of ten to fifteen thousand times the size of the dose with which we began.

Hammer gives his experience with one hundred cases treated by tuberculin, in whom sixty continued through the series of fifty-five injections, with an aggregate amount of 5.99995 mg. to each case. He invariably begins his inoculation with 0.000001 mg., increasing by 0.00001 until 0.0001 is reached, then by 0.0001 mg. and so on until the total of 5.99995 mg. is obtained, which requires about fifty-five separate injections.

This seems to be a safe and conservative method of administering tuberculin and requires

only a careful observation of the reaction and the length of time required for the patient to return to normal. No injection should be given until all signs of a negative stage have subsided and our patient shows a positive stage. This is the signal for another injection, increasing according to the rule enumerated above.

My experience with tuberculin would justify such a procedure, and in incipient or suitable cases no serious reaction has resulted and I was able to continue the tuberculin without producing any injurious results, such as an extension of the process or a hypersusceptibility to the tuberculin.

In conclusion I would give the following rules as a safe and conservative method of producing immunization in tuberculosis:

1. Tuberculin should be used only in incipient cases or in purely surgical tuberculosis.
2. The initial dose should not be larger than 0.0001 mg., and I should prefer to begin with 0.00001 mg.
3. The interval between injections can be determined only by the length of the negative phase, which will vary materially in different individuals.
4. The initial dose should be established if possible by the opsonic index.
5. If a hypersusceptibility is established then you must rest until this has disappeared, when you can begin with your initial dose again.
6. Tuberculin therapy is best given by laboratory men, or at least by clinicians who can control the increase of dosage by laboratory findings.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from page 54, Vol. II.)

Some of the early medical history of northeastern Indiana is given in an article by H. P. Ayers, M.D., of Fort Wayne (*Transactions of the Indiana State Medical Society, 1874*), entitled, "The Medical History of Allen County." The article is deemed worthy of reproduction in its entirety:

MEDICAL HISTORY OF ALLEN COUNTY.

"The first white doctors who visited the site of Allen County were connected with the soldiers, traders and missionaries in the early part of the last century, but their names have not descended to the present generation. The first whose name

is now known, was Dr. Curtis, who visited Fort Wayne in 1810, but was as much an Indian trader as a physician.

"The same year Dr. Turner, who was connected with the United States Army, visited this place, and remained about one year.

"Dr. Benezet, who was connected with the army, came in 1811.

"In 1812 Dr. Crow, with Dr. Vorees, United States Army surgeon, reported for duty at this place. He accompanied a party of twelve men some miles north, where they were attacked by Indians, and all killed but the doctor, who proved too fleet for his red pursuers.

"In 1815 Dr. Treat, who was also attached to the United States Army, relieved the former surgeon. He was, as I have learned from some of our oldest citizens, a most excellent man and physician, and by his urbanity and kindness endeared himself to all who knew him. He was ordered to Savannah, where he died, much regretted by all.

"Dr. Smith, a volunteer surgeon, visited Fort Wayne in 1817 with a rifle company. He was from Lancaster, Ohio, and remained till 1818.

"In 1818 Dr. Uphane, from Canada, located in Fort Wayne, but only lived a short time, and was buried here.

"In 1818 or 1819 Dr. Benjamin Cushman moved to this place, and commenced the regular practice of medicine, and may properly be considered the first resident physician. Dr. Cushman has left a good reputation as a practitioner of medicine. He came from Richmond, Ind., but of his previous history I have not been able to learn anything. He died about 1839.

"Dr. L. G. Thompson was born in Mercer County, Kentucky, in 1803, and moved to Fort Wayne in 1825. He graduated in Ohio Medical College in 1837 and died in 1845. Dr. Thompson was the second resident pioneer physician in Fort Wayne, and commenced his practice about 1821. He proved himself to be an able and skillful man, and has many friends yet living who bear the most ample testimony to the assertion. His excellence of character did not consist alone in his medical abilities, but as a friend, a neighbor and citizen. He had few superiors. To the poor he was always kind. Dr. Thompson may be ranked among the best in his profession and as a valuable citizen in all the departments of society. His name will ever be associated with the early history of our city.

"In 1834 Dr. Lewis Beecher, a graduate of Fairfield Medical School, New York, located in Fort Wayne. Dr. Beecher was a man of fine

abilities, and soon entered an extensive and valuable practice in medicine and surgery. He continued in his profession until 1841, when he abandoned it and engaged in the sale of drugs and medicines until his death, which occurred in 1849.

"Dr. P. G. Jones commenced the practice of medicine in our city in 1834, and died in 1853 from dissipation. Dr. Jones was a graduate of Maryland University, in Baltimore, Md. He was a volunteer surgeon during the Mexican war and served faithfully until its close.* He possessed a mind of more than ordinary ability and was a close observer of men and things. He abandoned the practice several years before his death.

"In 1842 Dr. Bernard Sevenick emigrated from Prussia and made Fort Wayne his home. He had been a surgeon in Bonaparte's army and served during several campaigns under that great commander, and continued, during life, to maintain a martial bearing in all he did. He was gentlemanly and polite in all his intercourse and took great pleasure in maintaining the dignity of his profession. He died in 1849.

"Dr. B. C. Rowan settled in Fort Wayne in 1842. He was born in Westmoreland County, Pennsylvania, 1817, and died in Fort Wayne in 1862. Dr. Rowan graduated at the University of New York in 1847. In 1862 he entered the Army of the Cumberland. During the evacuation of Corinth he contracted disease, which caused his death soon after. He was esteemed and respected by all who knew him. Frank, unobtrusive and honorable, he was rapidly gaining a high position as a physician and man. He left many who yet regret his death and feel that he was too early cut down.

"Dr. Banks was born in Cincinnati Ohio; graduated at Louisville Medical College, Louisville, Ky.; commenced the practice of medicine at Fort Wayne, 1844. He continued here four years, when ill health compelled him to retire from the hard labor of riding. During 1849 and 1850 he resided in Cincinnati, where he died. Dr. Banks was an active, energetic man, and his prospects of success were flattering, but disease too soon seized him, and death too soon cut him off.

"Dr. J. Dailey graduated at Jefferson College, Philadelphia, and settled in this city in 1846, where he died in 1864. Dr. Dailey had all the mental ability for high attainments, but sacrificed all to intemperance.

"Dr. H. J. Weihmer was born in Hanover, Germany, in 1799; graduated in Berlin, Prussia,

* Assistant Surgeon, Fifth Indiana Volunteer Regiment.

in 1827; emigrated to the United States in 1838; became a resident of Fort Wayne in 1847, and died in 1859. Dr. Weihmer was gentlemanly and affable in all his intercourse with others, and had many warm and admiring friends. He was a successful and careful practitioner of medicine, and has left a large circle of admirers who yet speak of his worth.

"This completes the sketch of white physicians so far as we can ascertain, but we think it would be an unfinished task did we omit all reference to Indian doctors.

"Dr. Buck-on-ga-helas was largely engaged in the practice of medicine in Fort Wayne in 1804. He was physician and surgeon to Little Turtle, the great commander of the Miami tribe of Indians. He acquired a great reputation in the cure of bites by poisonous snakes, but more particularly from poisoned arrows then used among the Indians. His practice, however, was not confined to the Indians, but was quite extensive among the white inhabitants.

"In 1807 an Indian named Ma-te-a acquired some celebrity as a doctor, and was employed by many of the French settlers in preference to any other. It may be interesting to many to refer briefly to some of the appliances of the Indian doctor in the treatment of disease.

"The Indian doctors to whom I have referred were sharp, shrewd Indians and well acquainted with all the resources of the *materia medica*. Some physicians remember the days of doctors' saddle-bags, and perhaps some are yet compelled to use them. The Indian's medicine bag was made up in the same way ladies now make their needle cases. Several pockets of leather were fastened by thongs to a long strip of buckskin six or eight inches wide and the length according to the wishes of the doctor; each pocket was closed by strings on the top of the pocket. Each pocket was filled with certain roots, herbs, charms, according to the extent of the doctor's knowledge, and then hung over the right breast: or, when he traveled, it was folded up and carried as a large roll. Army surgeons, under civilized regulations, examine the mental and physical fitness for military service, but under Indian regulations the surgeon's duty was to prepare the young warrior for duty by a spiritual preparation and also furnish him with a war medicine. The former was accomplished by sweating, bathing and eating bitter herbs and roots; the latter by the physician placing in the young warrior's shot-pouch a 'war physic' or 'war medicine,' which was to protect him against all the accidents and ills of warfare. The prescription was bones of a snake and wild cat; the *modus*

operandi, or rationalé of the charm, I need not give. But to our subject more particularly. Indian doctors possessed a considerable knowledge of the medicinal virtues of plants and their applicability to the poisons of reptiles, poisonous arrows, and the diseases incidental to savage life. But many of their efforts consisted only in incantations and juggleries. The doctor would usually dress and paint himself in the most grotesque and frightful form, and then with a great variety of contortions of the body approach his patient. He would breathe on him, blow in his face, squirt medicine in his mouth and nose; rattle beans or pebbles in a dry gourd over him, at the same time keeping up the most horrid gesticulations and noises to frighten away the disease. After thus making his professional visit, he would retire to await the result of his effort. One peculiarity more: The Indian doctor would sometimes, after compounding his potion, drink it that he might thus cure his patient, a custom which, we think, would be highly repugnant to civilized doctors. I can not perhaps close this outline of the medical history of this section of the State of Indiana better than by quoting a few lines from 'Hiawatha':

"Then the medicine-men; the Medas,
The magicians, the Wabenos,
And the Tossakuds, the prophets,
Came to visit Hiawatha;
Built a Sacred Lodge beside him,
To appease him, to console him,
Walked in silent, grave procession,
Bearing each a pouch of healing,
Skin of beaver, lynx, or otter,
Filled with magic roots and simples,
Filled with very potent medicines—
Then a magic drink they gave him."

MEDICAL MEN IN THE EARLY DAYS OF INDIANAPOLIS.

Dr. W. H. Wishard read before the Marion County Medical Society, Dec. 6. 1892, a paper on the above subject, published in *The Indiana Medical Journal*, vol. xi, page 199, from which extracts are made.* His paper comprises the first fifteen years of history, 1821 to 1836.

"Dr. Samuel G. Mitchell, a native of Kentucky, located in Indianapolis in April, 1821. He was the first physician to locate in our capital city. He was a licensed practitioner and had never attended lectures.

"Dr. Isaac Coe was the second physician to locate in Indianapolis, in May, 1821. He was a native of New Jersey. Besides being a conscien-

* See also State Transactions, 1893, p. 16.

tious practitioner and indefatigable in his labors, he helped to organize the first church and first Sunday school in the city. His remains repose in Crown Hill Cemetery by the side of his wife.

"Dr. Livingston Dunlap came from the State of New York in July, 1821. He and Dr. Mitchell formed a medical partnership, the first medical firm in the city. Dr. Dunlap ranked high as a physician and surgeon. He was in especial demand as a consultant. He was councilman from his ward in 1834. He was physician of the Deaf and Dumb Institution for several years, and was postmaster from 1845 to 1849. He was elected professor of theory and practice in 1849 at the organization of the first medical college in Indianapolis. He practiced in the city for 41 years, and at the date of his death, in 1862, was the senior physician. He was the first permanent president of the State Medical Society, presiding at the session of 1849.

"Dr. Scudder located in Indianapolis in 1821, and died there in 1829. He was regarded as an excellent physician and a Christian gentleman.

"Dr. Jonathan Cool, a native of New Jersey, located in Indianapolis in August, 1821. He was a graduate of an eastern medical college. He received an appointment as surgeon in the United States Army, and for some time was stationed at the barracks at Newport, Ky. He became so intemperate that few would trust him, and died in 1840.

"Dr. Charles McDougle, a native of Ohio, came to Indianapolis in 1828. He formed a partnership with his brother-in-law, Dr. Dunlap, who married McDougle's sister. In 1832 he received an appointment of surgeon in the United States Army, in which capacity he won distinction. When Dr. Wishard met him at Pittsburg Landing in 1862, he was medical director of General Grant's army. He died in Virginia about 1884.

"Dr. John L. Mothershead, a native of Kentucky and a graduate of the Transylvania Medical College, located in Indianapolis in 1830 and formed a partnership with Dr. Mitchell. Later he was associated with Dr. Sanders, and still later with Dr. Bullard. He died in November, 1854. He was regarded as a successful practitioner.*

"Dr. John H. Sanders (1791-1850) was a native of Bourbon County, Kentucky. In the fall of 1819 he rode to Philadelphia on horseback, where he attended his first course in medicine. On his return in 1820, he located in his native county, and soon became the leading surgeon of

all that region of the state. In 1823 he graduated at Lexington, Ky. In the winter of 1829-30 he came to Indianapolis, and soon afterward formed a partnership with Dr. Mothershead. In 1839 he moved to Missouri, but returned to Indianapolis in 1841, where he continued to reside until his death, April 4, 1850. His last partner was Dr. P. H. Jameson. He ranked high as a surgeon."†

EARLY HISTORY OF EASTERN INDIANA.

In a paper on this subject, Dr. Joel Pennington, of Milton (*Transactions of the Indiana State Medical Society, 1873*) has the following to say:

"I settled in the village of Milton (my present place of residence) in October, 1825. The town consisted of seven families. We resided during the winter, in 10x12 cabins, with puncheon floors, clapboard roofs, stick and clay chimneys and ample fireplaces. We passed the winter very comfortably; had a full supply of all the substantials of life at low figures compared with present prices.

"About New Year I purchased of an old friend (Quaker) a hindquarter of beef, which cost, in the payment of a doctor bill, 2½ cents per pound. Pork was worth from \$1.25 to \$1.50 per one hundred pounds; corn, 10 cents per bushel; potatoes, 12½ cents; turnips, the same; sweet potatoes, 25 cents; wheat, 37½ cents, and all other products of the soil in proportional prices.

"Our first canal packets were run in connection with steamboat travel to Cincinnati, where most of our trading was done. This great change made the mode of traveling to points on the Ohio river so different from our former manner of reaching the cities, through mud and rain, that we certainly had good grounds for exultation. I will state for the information of the young men in the profession who have never traveled over bad roads that they can not realize the amount of labor and exposure to which we old doctors were subjected in the early practice in Indiana. We had no means of traveling, except on foot or on horseback. Buggies had not reached so far West, and if they had they would have been useless, on account of the condition of the roads. During twenty-five years or more I practiced on horseback, as also did my compeers; to that exposure and horseback exercise I

* See *State Transactions, 1855*, p. 76.
† "His oldest daughter, Zerelda G., married Gov. David Wallace, Dec. 26, 1836, and became the stepmother of Gen. Lew Wallace, and later so well known as Mother Wallace, the apostle of temperance and reform."—*Autobiography of Lew Wallace, vol. i*, p. 45.

am disposed to attribute a large share of the good health I possess at my advanced age.

"When called during the fever and wild delirium, we seated the patient on the side of the bed and held him there, by the aid of assistants if necessary, opened a vein in his arm by making as large an orifice as practicable, and allowed the blood to flow until his pulse became soft and less resisting, or until syncope supervened. We relied more on the effect produced than on the quantity of blood extracted, our object being to produce a decided impression upon the heart's action. Our patient being in a sitting posture and the blood escaping from a free opening, it did not require a great length of time to produce the desired effect. Often within ten to twenty minutes after faintness or sickness occurred the subject of this mode of treatment would become bathed in a copious perspiration, and the violent fever and delirium existing a short time before would have entirely passed away. Now, if the indications seemed to require it, we directed an emetic to be given, usually composed of tartarized antimony and ipecac combined, or wine of antimony. After free emesis and the sickness had subsided, if thought necessary, we gave a brisk cathartic, usually containing more or less calomel. After the *primæ viæ* had been well cleared, it was our practice to give opium in such doses as the case required, in order to allay all irritability of the stomach and bowels. We directed the usual febrifuges to be given if the fever should return, and these were given in such doses as required to arrest or mitigate it. We used no manner of temporizing treatment, but aimed our agents directly at the extermination of diseases. Opium, ipecac, tartarized antimony, nitrate of potassa, spirits minderer and spirits of niter, with other means too tedious to mention, were all frequently brought into requisition.

"Under the above manner of treating a case of remittent fever it was no uncommon thing on our second visit to find our patient sitting up feeling 'pretty well, except a little weak,' and within a few days able to return to his ordinary avocations. When we met with more protracted cases we had recourse to the Peruvian bark, gentian, columbo, and most of the ordinary tonics of the present time, excepting quinia, which was not in use. For some time after quinia was introduced the price was such that Hoosiers could not afford to use it. The first I used cost at the rate of \$30.00 per ounce. I may state in this connection that tartar emetic was a favorite

remedy in all the active or acute forms of disease.

"We seldom lost patients from acute diseases. It would have detracted from the standing of a medical man should it have been known that he lost a patient from inflammation. He might lose a patient from sheer debility and be excusable, but not from acute disease, provided he saw the case in an early stage of the attack.

"Among the oldest physicians of our county was Dr. Ithamar Warner, who first resided at Salsbury, our first county seat. After the business of the county was transferred to Centreville, the Doctor removed to Richmond, where he had a large and remunerative practice to the close of his life. He never married: was singular in many respects, and very irritable, so much so that his patients were pretty certain to carry out his directions without equivocation.

"Dr. J. R. Mendenhall, also of Richmond, was the first graduate in medicine in the county of whom I have any knowledge. He received the degree at the Lexington school, Kentucky. He was a well-qualified physician and an honorable gentleman. He had a good practice, but resigned it in a few years and turned his attention to speculation in real estate, which proved to him a more lucrative business. He believed the responsibility attached to the practice largely overbalanced the remuneration it afforded.

"Dr. Wm. Pugh, at one time a partner in the practice with Dr. Mendenhall, resided in Richmond a few years and removed to Centreville, where he died in 1829. I think he also attended a course of lectures in the Lexington school.

"Following these were Drs. Griffith, Plummer, Vail, and Smith, with quite a number of others, who resided but a short time in the city of Richmond, whose names I never knew, or can not now recollect. Therefore, I must confine my notice to a few of the more prominent practitioners of an early day, previous to the year 1835; otherwise I should promote sleep among my hearers from the length of this paper.

"The first named, Dr. Griffith, came to Indiana from the city of Philadelphia; he was a member of the Society of Friends; soon ingratiated himself into the confidence of the people, and had a fair practice; was called in consultation by the surrounding physicians and considered an able and scientific physician.

"Dr. J. T. Plummer was a student of his and married his daughter. He was also a Friend; graduated. I think, at one of the Philadelphia schools; was prominent as a well-educated and scientific physician, and at one time was con-

sidered the best practical chemist in the city, for in most cases of suspected poisoning he was called on to analyze the contents of the stomach and determine the result. He died a few years ago from that scourge of mankind, consumption.

"Dr. J. Vail years ago had an extensive practice in and about Richmond; was highly esteemed as a practitioner; was a member of this society; contracted disease in the army (where he filled the position of regimental surgeon) from which he never fully recovered.

"Dr. Wm. B. Smith read medicine with Dr. Plummer, and had a reputable practice for a number of years. He was a genial, social companion, but in time became intemperate, so much so that it damaged his practice. Yet he had many warm friends to the time of his death.

"There are other medical gentlemen of Richmond yet living and whose names stand high, and whose biographies must be left for abler pens than mine. The early physicians of Centreville were Drs. Sackett, Finch, Pier, Crews, and Dorsey.

"Dr. Sackett was the oldest practitioner of Centreville. Soon after the county seat was established there, he was elected recorder of the county, which office he continued to hold for many years; indeed, until his death. He was another victim of intemperance.

"Dr. Finch was a reputable practitioner and a gentleman. He did not reside long in Centreville, and removed to Noblesville, where he died in a short time of phthisis.

"Drs. Pier and Crews did not remain long in the city. I had but little acquaintance with either of them, but believe that they stood fair as physicians.

"I must next speak of my friend, Dr. W. W. Bunnel, of Washington, who studied medicine with Dr. Lathrop, of Waynesville, Warren County, Ohio. Dr. Bunnel was my preceptor during the last six months of school that he ever taught. After qualifying himself for practice, he settled in Washington, where he resided until his death, which occurred in 1852. He died of cholera, being sick but a few hours. He was a cautious, rather timid, and conscientious practitioner, a man well read, and one who thought carefully before he acted. In 1826-7-8 he had much to do with that old-fashioned disease known by the name of milk sickness. In order to become acquainted with its symptoms and treatment, I spent some time with the Doctor in visiting his cases, at which time he had as many as five or six in the different stages of the complaint, which gave me an opportunity to learn what I could of the disease as it presented itself

at that early period. It was truly a formidable disease and attended with great fatality.

"A Dr. Waldo,* of Jacksonburg, seven miles northeast of Milton, had the largest practice in milk sickness of any other physician in the county, and had greater notoriety for success in its treatment. He was one of the oldest practitioners, and was a noble specimen of a man physically, drank more intoxicating liquors than was profitable, but never to my knowledge got so drunk as to incapacitate him for business. He was immoral in many respects, very profane, yet with all this dark catalogue he had many redeeming traits of character. In an early period of our history he represented Wayne County in the state legislature, when it met at Corydon. He was termed, in common parlance, a bold physician, used the lancet freely, gave from scruple to dram doses of calomel, etc. In fact, he might be called a northern Dr. Cartwright, as regarded doses of medicine, without disparagement to that gentleman. More than twenty years ago he removed to a farm on White river, north of Muncie, where after a few years he died.

"Time will not allow me to dwell longer on the physicians of 'lang syne,' yet I can not omit speaking of my friend, Dr. John Pritchett, of Centreville. He and I (if I mistake not) are the oldest practitioners of medicine now living in the county. I have one and a half or two years the precedence in time. The Doctor is an urbane gentleman in every sense of the term; at present confines himself principally to town practice. When the gold fever was at its height in California, Dr. Pritchett left home and business in search of 'filthy lucre,' and in a few years returned, worsted pecuniarily. Early in the late war he was commissioned as regimental surgeon of the Fifty-seventh Regiment of Indiana Volunteers, which position he filled with honor and credit to the close of the war.

"The early physicians of Connersville, Fayette County, to the best of my recollection, were Drs. Moffet, Gale, and Miller; a little later we had Drs. Brown and Mason, who were partners in the practice of medicine for some years."

Dr. Joel Pennington (1799-1887) was born in Huntingdon county, Pennsylvania, and, after a medical preparation, located in Milton in 1825. I introduce him as deserving a place in Indiana medical history, if for no other reason than that he was a pioneer physician and contributed the above article. He has told his own story in simple language. He was president of the State Medical Society in 1873. He practiced medicine at Milton for more than half a century, and finally, when accident reduced him to penury, and paralysis rendered him helpless, charitable friends supplied his needs and made him comfortable.

* Dr. Loring A. Waldo. Died in the thirties, and is buried at Windsor, Randolph county.—Kemper.

(To be continued)

THE MODERN VIEW OF THE ETIOLOGY AND TREATMENT OF ACNE VUL- GARIS AND ACNE ROSACEA.*

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Acne vulgaris and acne rosacea constitute a large per cent. of skin diseases and are, next to eczema, the most frequent skin disorders which physicians are called upon to treat. Largely limited to the face, these two varieties of acne may give rise to an unsightly appearance or disfigurements which bring about at times the acutest mental suffering and compel the victims to seek relief; or these diseases may be of so mild a character that no remedial measures are demanded. As physicians we see the moderate and severe cases, and from the young girl with her pimpled face to the old aleoholic imbibier with his tell-tale red and enlarged nose we are called upon to afford relief to these facial blemishes which are as disquieting and serious to the patient as many diseases more grave in character, but less disfiguring to the appearance.

In the etiology of acne vulgaris many factors must be considered. Malcolm Morris divides the predisposing causes into (1) an anatomical factor; (2) certain physiological factors, and (3) a bacteriological factor. The anatomical factor is the congenital, inherent susceptibility of every person's various tissues which makes one prone to skin diseases, another to kidney lesions, etc. So this susceptibility or structural weakness of the skin may predispose to acne; and it seems often to give rise to an excessive sebaceous secretion and impaired circulation which brings about an oily seborrhea and comedones—the almost universal precursors of acne vulgaris.

The predisposing physiological factors are: (1) age, (2) reflex influence. Age is the most important etiological consideration. Acne vulgaris is predominantly a disease of late adolescence and puberty because at this time we have a greatly increased activity of the pilo-sebaceous glands, which, in the latter, easily become excessive with an accumulation of sebaceous matter, congestion and conditions conducive to inflammation. Age is the chief predisposing cause; the physiological activity in the skin of the adolescent period is perverted into a pathological activity.

These conditions of the skin which predispose to acne vulgaris are often caused or aggravated by certain reflex disturbances which have the

effect of causing congestion, overactivity or malnutrition. The most important of these reflex disturbances are digestive disorders and constipation. It is difficult to say whether there is a definite reflex between the skin and the gastrointestinal tract or whether by absorption of toxins from maldigestion or constipation and the circulation of these toxins in the blood, the skin and its glands are affected. However, we do know that acne and gastrointestinal disorders are often associated with the latter, seemingly acting as a causative agent. Likewise uterine and ovarian diseases, at times, seem to have a direct bearing upon the causation of acne, and we often notice in girls that the acne lesions are much worse at the time of menstruation. Anemia and chlorosis are also often associated with acne and may become an indirect agent by bringing about a malnutrition of the skin. Other reflex causes are sometimes cited, but their influence is doubtful or is, at most, of no great importance.

The bacteriology of acne vulgaris is not yet definitely settled. The most recent investigation points to a direct bacteriological cause. Sabouraud and his followers claim that seborrhea and comedones always are precursors of acne vulgaris, and that these conditions are produced by a specific seborrhie microbacillus which sets up in the sebaceous follicle a seborrhea, and this leads to irritation and a plugging up of the follicles with the production of comedones. Now we have a favorable soil for a secondary infection with the ordinary staphylococci or the *Staphylococcus albus butyricus*, which may directly produce the acne lesions. Many of the American dermatologists do not agree with Sabouraud. Pusey, in his new work on skin diseases, says that Sabouraud's theory does not square well with the general characteristics of the disease. More recently Gilchrist, of Johns Hopkins, has described a bacillus which he calls the bacillus acnes and which he contends is the specific cause of acne vulgaris. This bacillus is agglutinated by the patient's serum and, therefore, Gilchrist proposes the theory that certain constitutional symptoms, like anemia, headache and constipation, are results of the toxemia induced by the specific organism rather than predisposing causes of the acne. This view is accepted by few authorities, but the work of Gilchrist and the evidence he adduces must not be disregarded. At present the accepted opinion holds that the inflammatory lesions of acne vulgaris are produced by the ordinary pyogenic bacteria, usually the *Staphylococcus albus*; that the influence of age and certain reflex causes set

* Read before the Indiana State Medical Society at French Lick, June 19, 1908.

forth above, the presence of seborrhea and comedones—all form a favorable soil for the action of these pyogenic bacteria and the production of the disease.

Acne rosacea is a compound disease consisting of an acne and a rosacea. It is found in middle and advanced age, as acne vulgaris is a disease of youth. The two disorders differ also very markedly in their pathology and symptomatology, but in etiology they are closely allied. Any disturbances which may bring about reflex flushing of the face may act as an exciting cause. Digestive disorders and intemperance in alcohol are the most important of these causes, and will be found to underlie nearly every case. Alcohol may act not only to disturb digestion, but also as a direct cause of peripheral vascular dilatation, which affects largely the so-called "flush" area of the face. Exposure to the weather is often a direct cause, and when combined with alcohol there are at times produced the aggravated cases known as rhinophyma. Other contributory causes, such as pelvic disease, use of cosmetics, lack of cleanliness, anemia, inordinate use of tea and coffee, etc., are sometimes noted, but they are of minor importance. Sabouraud and his followers hold that seborrhea, induced by its specific bacillus, is always the origin of acne rosacea the same as in acne vulgaris; but this theory is not credited by American dermatologists. There is, however, often found in acne rosacea an accompanying seborrhea oleosa—the same as is found in acne vulgaris.

In the treatment of acne every contributing etiological factor must be sought out and corrected. Many failures can be attributed to the neglect on the part of the physician to study these cases sufficiently to determine the cause underlying the disease. A decade ago the Vienna school of dermatologists tabooed all treatment excepting purely local external measures; but to-day we believe differently. It is true that in many cases no etiological factor can be found, and in many cases age alone seems to be the determining cause; but in a large per cent. some contributory cause can be discovered if carefully sought for. Most often disorders of the gastrointestinal tract or anemia seem to require attention. In the former the diet first must be regulated and all rich and indigestible foods interdicted. Certain foods in certain cases act directly to aggravate the disease. Remedies that improve digestion are often indicated. The old Startin formula or the *mistura acidi* formula, recommended by so many writers, is useful, especially where there is a coexisting anemia; but

it is unpalatable and objectionable to many patients. I have found large doses of dilute hydrochloric acid, 30 to 60 gts., one hour after eating, very useful in many cases, or a combination of creosote and bismuth subgallate in capsules, which acts as a sedative and antifermentative. In long-standing and severe gastric disorders, the stomach contents should be analyzed to determine the exact nature of the trouble. Constipation should be corrected by a suitable diet, exercise and laxative drugs. Anemia calls for iron in some form, and this is the most important remedy in many cases. Continue its administration at least three months in order to get its full effect. After gastrointestinal disturbances and anemia the most frequent contributory cause of acne is pelvic disease in women, which should, if possible, be corrected. Menstrual irregularities in young unmarried women should especially be looked into and rectified. Of purely internal empirical treatment the use of arsenic is the only drug I can, from personal experience, recommend. Where there is no gastric disturbance this drug will prove useful in many cases. Stelwagon speaks highly of the use of cod liver oil in these cases.

The local drug treatment in acne vulgaris I shall not take up in detail. Sulphur in some form is pre-eminently the most useful drug. If one understands the use of this one remedy, there is little need of using any other, and textbooks only confuse by their long list of formulas and the needless number of drugs recommended. Sulphur is best used in the form of *lotio alba*, which is composed as follows:

R. Potass. sulphuret,	
Zinci sulphat, æ	gr. xxx to 3iv
Aq. rosæ	3iv

The two drugs should be each dissolved in half the water and then mixed and not corked until all the gas has escaped, after which there should be no odor. Fresh potassium sulphuret must be used. The weaker strength of the solution should be prescribed in irritable or inflammatory cases and the strength increased up to tolerance. Sometimes where there is much inflammation and tenderness the best results are obtained from a soothing and drying lotion like the zinc oxid and calamin with 15 gr. of boric acid to the ounce. In very sluggish cases good results are sometimes obtained from a "pealing" salve. For this purpose a 20 to 40 per cent. ointment of resorcin may be used. It is applied at night for half an hour, and then removed by wiping the part with some bland oil. The applications are repeated until a dermatitis is excited, which is then treated by soothing applications. When

using these sulphur lotions or other applications it is most important that the patient keep the skin clean by the use of very hot water and certain soaps which remove the natural oil from the skin and by a keratolytic action cause an exfoliation of the epidermis. Tincture of green soap or soaps containing sand are best for this purpose. This hot water and soap should be used every night for ten minutes or longer to be followed by a massage of the skin, which the patient can readily learn to do with a little instruction. Comedones should also be extracted and all pustules opened and a mild antiseptic used.

This local drug treatment of acne vulgaris is at best not eminently satisfactory. Many cases may be improved and some cured, but a large per cent. are failures.

George Henry Fox, of New York, says that the ordinary lotions, creams and balms as recommended by text-books are "fakes in their conception and failures in their action." He uses no drugs locally, excepting strong solutions of resorcin or salicylic acid, to set up a vigorous desquamation, and he does not often resort to these, but relies upon facial massage, friction and the use of the dermal eurette. Much can be done by these mechanical means, and rationally used they, no doubt, are of greater service than drugs. The massage and friction stimulate the sluggish circulation, and with the eurette comedones are expressed, pustules evacuated and the whole surface of the skin stimulated into better action. In very indolent cases these measures are especially useful. The only disadvantage is that the curette is painful if thoroughly used, and consequently many patients object to it.

The Roentgen method in the treatment of acne vulgaris has of late years come into great prominence. Many dermatologists use it exclusively as a routine measure; the majority use it in all obstinate cases; a few condemn it or prefer the older methods. The rationale of the *x*-ray in its action in acne vulgaris lies in its effects upon the sebaceous glands, which are the site of the disease, and its general alterative influence upon the skin. This effect of the ray upon the sebaceous glands is a lessened activity and a partial atrophy. We find after a few treatments that the seborrhea disappears, the comedones and acne lesions cease to appear, the openings of the sebaceous follicles become smaller and the whole appearance of the skin is greatly improved. The scars from former lesions are, as a rule, partially absorbed.

The technic of the Roentgen treatment of acne is of the greatest importance. Where undesir-

able effects, such as severe *x*-ray dermatitis, have been obtained, there will be found almost invariably an ignorance or neglect of the proper method of applying the rays. My belief is that undesirable effects are scarcely possible if the correct technic is used. My technic is as follows: All the unaffected parts are covered with lead foil. Low vacuum tubes are used reading No. 1 or 2 on a Walter scale, or backing up about two inches of spark. In the beginning the tube is placed 10 inches from the skin, the time of treatment 5 minutes every second day. The distance is gradually decreased to 5 inches and the time increased to 8 minutes. A 12-inch induction coil is used with a mercury turbine interrupter. Not more than one and one-half amperes of current is used through the primary with about one-fourth milliamperes through the tube. I always cut the current down until there is only a faint fluorescence on the action hemisphere of the tube. Pusey lays particular emphasis upon this latter point; and this probably accounts for his unusual success in treating acne vulgaris with the Roentgen ray. After six to fifteen treatments, varying in different patients, there will be noted a slight erythema, and the patient may notice a slight itching. When these symptoms appear all treatment is suspended for a month and then repeated if necessary. In ordinary cases no repetition is necessary; for it will be found in most cases at the end of this month (during which time the effects of the ray upon the skin are still active) that there has been a marked improvement or cure of the disease. In some obstinate cases I prolong the effects of the ray, after this interval of rest, by a treatment every four or five days. In acne about the face a marked dermatitis from the Roentgen treatment is to be carefully avoided, for it may cause an atrophy and wrinkling of the skin, which in female patients especially may be seriously objected to. All authorities are agreed that this atrophy may follow only after a very marked dermatitis, and this may be avoided in every case by care and attention to the correct technic. There may be a possible exception in the very rare cases of idiosyncrasy or marked susceptibility of the patient to the ray. I have never met with such.

This technic, which differs in several respects from that used in skin cancer and some other skin diseases, is practically the same as advised by most dermatologists and *x*-ray operators. It can be followed by any physician who wishes to use the *x*-ray in the treatment of acne, and who understands the practical workings of the Roent-

gen apparatus. With it the dangers of a severe *x-ray* dermatitis are practically eliminated. The results of the Roentgen treatment in acne vulgaris are conceded by every one who has used it to be the very best obtained from any treatment. It is counted by some as a specific. Even in the hands of the inexperienced there should be exceedingly few failures. Relapses are very uncommon after the Roentgen treatment and, in my experience, are of slight importance.

During the last eighteen months there have been many reports of the opsonic treatment of acne vulgaris. At the meeting of the International Dermatological Congress which met in New York last September, there were reports from several members. Whitfield, of London, said: "The treatment is uncertain. Some cases give brilliant results, others are absolutely unaffected." Schomberg, of Philadelphia, summed up the opsonic treatment of acne by stating that it was indefinite. Taylor, of Liverpool, said that some of his cases improved under the use of the vaccines, but the majority required *x-ray* treatment before a cure resulted. Drs. J. V. Reed and H. S. Thurston, of this city, reported before this society a number of cases. There were effected a cure in a few and an improvement in the majority. The difficulties of the technic in determining the opsonic index and using autogenic vaccines are, at present, serious objections to the opsonic method; but the results are indicative of most useful possibilities of the vaccine treatment in acne vulgaris as well as some other skin diseases.

The treatment of acne rosacea is very similar to that of acne vulgaris. In rosacea the internal treatment is even of more importance than in simple acne, for in a larger per cent. are we able to find a distinct cause for the disease. The stomach and bowels are, in the majority of cases, found at fault and should be treated along the lines laid down above. All condiments and stimulants, especially alcohol, should be prohibited. Hot drinks are at times distinctly harmful. In women attention should be given to the menstrual function and to any functional or organic uterine disease. Anemia at times calls for iron. Every possible etiological factor should be considered and corrected if possible. Some cases are almost hopeless because of our inability to correct some chronic gastrointestinal or pelvic disease. A few cases need only external treatment as the disease seems to be entirely a local affection.

The best external application is lotio alba, and by intelligent use all can be done with this prep-

aration that is possible from local medication. It should be used in sufficient strength to cause pronounced desquamation. In many cases improvement in the redness may be obtained, but as a rule it soon returns. The dilated blood vessels can be removed permanently only by electrolysis. Where there is hypertrophy, multiple scarification is recommended, but few patients will submit to it. In pronounced rhinophyma the knife may be used and the nose trimmed down to its normal size.

In severe cases of rosacea the *x-ray* is by far the most successful treatment. The folliculitis and seborrhea, if present, it controls very quickly; the redness is more obstinate and usually requires prolonged treatment to effect a cure. This fact is the cause of many reported failures. I think, and is the reason why the Roentgen treatment in text-books is not recommended so highly in acne rosacea as it is in acne vulgaris. I use the same technic in rosacea as in simple acne, but I carry the effects of the ray further. I seek to increase the redness which the disease shows by an *x-ray* erythema, and prolong this several weeks by continuous short treatments. Good judgment must be exercised not to overtreat, and the time of the exposures can be determined only by experience. Usually 5 minutes twice a week with the tube 5 inches from the part is sufficient to prolong the effect. For beginners in *x-ray* work it would be better to treat as in simple acne, but carry the effect to a marked erythema and then let the patient rest a month and repeat, if necessary, several times. The face is protected by lead foil and only the diseased areas exposed.

My records show ten cases treated since following this particular method, and all have been cured. No other external treatment was used in any case. One of these cases showed considerable hypertrophy which entirely disappeared.

CONCLUSIONS.

I would sum up and emphasize the points in this paper as follows:

1. Acne vulgaris is usually a pyogenic infection implanted on a skin whose functions are perverted by the influence of age, reflex disturbances or seborrhea.

2. Acne rosacea is an acne implanted upon a chronic hyperemia or rosacea which arises almost invariably from reflex influences from the gastrointestinal tract or pelvis.

3. Internal treatment in both varieties of acne is exceedingly important. Reflex disorders must be sought for and corrected, if possible, before the best results can be obtained.

4. External drug treatment in both diseases is usually disappointing. Sulphur in the form of lotio alba properly made is the best external preparation, and should vary in strength suitable to the condition of the disease.

5. Mechanical treatment, such as the use of hot water, soap, massage and the dermal curette, is exceedingly valuable.

6. The opsonic method in acne vulgaris is promising.

7. The Roentgen treatment of both acne vulgaris and acne rosacea is the most valuable. In its certainty of cure and infrequency of relapse it almost approaches a specific.

8. The technie of using the *x-ray*, say in acne, is of paramount importance. If the ray is properly applied there should be few, if any, failures and no undesirable effects.

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THE OPHTHALMO-TUBERCULIN TEST.*

CHAS. G. BEALL, M.D.
FORT WAYNE, IND.

Wolf-Eisner and Calmette, working independently in 1907, were the first to suggest the instillation of old tuberculin in the conjunctival sac as a test for tuberculosis.

Wolf-Eisner used a 1 per cent. solution of old tuberculin. Calmette used an aqueous solution prepared by the precipitation of crude tuberculin with 95 per cent. alcohol, the precipitate being collected and dried. The object of this is to set free the product from glycerin, which might irritate the eye. The solution that has been used generally is a $\frac{1}{2}$ or 1 per cent. solution of the precipitated tuberculin.

Both eyes should first be examined for pre-existing differences. The lower lid is everted and a drop instilled while the head is tilted backward, or while the patient is reclining, care being taken that the solution does not run out of the eye.

Dr. Baldwin has suggested a scheme for recording the results of the test, and this was used in the series to be reported.

The method is reported as follows:

Negative.—No difference in color when lower lids are pulled down and compared.

Doubtful.—Such difference in caruncle and conjunctiva that one is scarcely certain it exists.

+. Distinct palpebral redness and secretion.

++. Ocular and palpebral redness with well-marked secretion.

+++. Deep injection of entire conjunctiva with edema of the lids, photophobia and secretion.

The reaction, when positive, occurs in from 4 to 12 hours, and usually reaches its height in 14 hours.

Calmette, in his series of tests, found the reaction was positive in all, or 100 per cent., of his tuberculous cases. Other observers have not had such results, the percentages being from 50 to 90.

Incipient cases give the largest percentage of reactions, a little more than half of the advanced cases responding to the test. A comparatively large proportion of apparently non-tuberculous typhoid-fever patients react positively to the test.

There is some danger in applying the test, despite Calmette's claim that it was harmless in 10,000 cases. Within the past six months I have collected from the literature at hand 499 cases in which there were severe reactions in 13 instances, that is, 1 in 38. the inflammation lasting from ten days to three months. In two of these an iritis developed.

The reaction has been found to be very severe where there is some coexisting irritation, such as conjunctivitis. Weber obtained a positive reaction in five apparently healthy doctors who irritated their eyes, reading by artificial light for prolonged periods. In three the reaction was very violent.

The ophthalmic-tuberculin test is still in an experimental stage, and not enough is yet known about it to enable us to draw positive conclusions. In spite of the danger of a prolonged inflammation of the eye and the uncertainty of the test, there is probably one class of cases in which it will be applicable, namely, in febrile cases in which the subcutaneous test can not be applied. Furthermore, it may be shown that a positive eye reaction indicates an active lesion, i. e., one requiring treatment.

The subcutaneous tuberculin test is firmly established and very accurate. Brown, of the Adirondack Cottage Sanitarium, in his article in Osler's System, says: "No case of early or incipient pulmonary tuberculosis has yet been shown to fail to react to a dose of 10 mg. or less of old tuberculin." So far no case of syphilis, actinomycosis, leprosy or chlorosis which reacted to tuberculin has been proved postmortem to be free from tubercle.

Furthermore, in Indiana 800 cattle have been slaughtered and examined postmortem following a positive tuberculin reaction, and in all but 17 there was macroscopic evidence of tuberculosis.

* Read before the Fort Wayne Medical Society, September, 1908.

In other words, the test was correct in 98 per cent. of cases.

These facts, I believe, warrant me in saying that the subcutaneous test is the most reliable one we have—therefore, a good one to compare with the accuracy of ophthalmic test. For this purpose 39 individuals (inmates of the Indiana School for Feeble Minded) were given the ophthalmic-tuberculin test and then were given the subcutaneous test. A 1 per cent. solution of precipitated tuberculin was used and the eye examined every two or three hours for a period of 48 hours. At the end of three days, in those who did not react and those who did, after the eye reaction had entirely subsided, the subcutaneous test was given, beginning with 1 mg., then 3 mg., then 6 mg. Of course, if an individual reacted to 1 mg. no further injections were given. The results are recorded in the accompanying table.

Name.	Age.	1 gtt. $\frac{1}{2}$ per cent. Solution T. Left Eye.	1 gtt. 1 per cent. Solution T. Right Eye.	1 mg. T. O. Hypo.	3 mg. T. O. Hypo.	6 mg. T. O. Hypo.	Ophthalmic-Tuber- culin Test.	Subcutaneous Tu- berculin Test.
1. J. M.	24	.	+++	+	+	+	+++	+++
2. J. M.	17	.	+++++	+	+	+	+++	+++
3. M. P.	16	.	+++++	+	+	+	+++	+++
4. H. S.	21	.	+++++	+	+	+	+++	+++
5. D. W.	18	.	+++++	+	+	+	+++	+++
6. F. H.	10	.	+++++	+	+	+	+++	+++
7. P. S.	26	.	+++++	+	+	+	+++	+++
8. E. G.	20	.	+++++	+	+	+	+++	+++
9. C. Mc.	14	++	+++++	+	+	+	+++	+++
10. A. R.	17	++	+++++	+	+	+	+++	+++
11. B. W.	20	++	+++++	+	+	+	+++	+++
12. L. C.	8	.	+++++	+	+	+	+++	+++
13. N. L.	10	.	+++++	+	+	+	+++	+++
14. R. S.	32	.	+++++	+	+	+	+++	+++
15. F. L.	9	.	+++++	+	+	+	+++	+++
16. C. W.	36	.	+++++	+	+	+	+++	+++
17. C. K.	19	.	+++++	+	+	+	+++	+++
18. C. S.	8	.	+++++	+	+	+	+++	+++
19. J. S.	10	.	+++++	+	+	+	+++	+++
20. H. S.	13	.	+++++	+	+	+	+++	+++
21. F. S.	14	.	+++++	+	+	+	+++	+++
22. F. L.	35	.	+++++	+	+	+	+++	+++
23. J. M.	14	.	+++++	+	+	+	+++	+++
24. W. D.	22	.	+++++	+	+	+	+++	+++
25. G. H.	12	.	+++++	+	+	+	+++	+++
26. T. R.	18	.	+++++	+	+	+	+++	+++
27. L. C.	12	|||	+++++	+	+	+	+++	+++
28. J. S.	14	.	+++++	+	+	+	+++	+++
29. M. W.	25	++	+++++	+	+	+	+++	+++
30. N. C.	25	.	+++++	+	+	+	+++	+++
31. E. M.	33	.	+++++	+	+	+	+++	+++
32. C. B.	13	.	+++++	+	+	+	+++	+++
33. H. P.	21	.	+++++	+	+	+	+++	+++
34. W. N.	7	.	+++++	+	+	+	+++	+++
35. L. K.	30	.	+++++	+	+	+	+++	+++
36. F. M.	15	.	+++++	+	+	+	+++	+++
37. G. C.	14	|||	+++++	+	+	+	+++	+++
38. H. P.	13	|||	+++++	+	+	+	+++	+++
39. E. T.	13	|||	+++++	+	+	+	+++	+++

From this table we see that the tests correspond in 72 per cent. of the cases and do not correspond in 28 per cent., but in all, except one, of the latter (No. 29) the subcutaneous test was positive, while the ophthalmic test was negative. This one individual (Case 29, arrested pulmonary tuberculosis), four months previously, had received a number of therapeutic injections of

tuberculin, and this may explain her failure to react. None of these individuals had an active form of tuberculosis, so far as could be determined clinically. It was found that, after the eye inflammation had entirely subsided and the tuberculin injected subcutaneously, it had the effect in a number of instances of causing a re-eruption of the eye inflammation. There was no appreciable rise in body temperature following the instillation.

The high percentage of reactions occurring in these unselected cases might at first sight seem surprising, but in the autopsies at this institution tuberculous lesions are found in at least 90 per cent. of bodies. Furthermore, 28 per cent. of the individuals react to tuberculin when admitted to the institution.¹

While these data are too small to draw final conclusions from, yet they seem to show that the ophthalmic-tuberculin test is not as delicate as the subcutaneous. On the other hand, while we know that a practically healed lesion will respond to the subcutaneous test, further investigation may show that a positive eye reaction indicates a more active lesion. These cases will be followed out in order to determine this point and a report made to you later.

TUBERCULOSIS OF THE KIDNEY.

EDWIN WALKER, M.D.
EVANSVILLE, IND.

I can not present to you anything new, but shall try to help impress some facts more firmly on your mind, which will help to clarify your cases. In discussing the diagnosis of an ailment, we often get lost in a maze of symptoms and the salient ones escape our attention. In most diseases there are a few manifestations which will determine the diagnosis, while many others are of secondary importance, or common to so many conditions that they are of but little value to us. We must always bear in mind also that in any grave disorder a diagnosis to be of value to the patient must be early, and the many late symptoms are of little value to us. It will be my effort to present a few points which can aid in the early recognition of disease, instead of giving in detail all facts pertaining to the subject in hand.

Before I enter upon the subject I have chosen for to-day I want to say a word about the relation of medicine and surgery, which, while self-evident, is still too often obscured or lost sight of.

1. "Some Experience with the Tuberculin Test," Fort Wayne Journal-Magazine, vol. xxvii, p. 418.

We so often hear it said that surgery has advanced more rapidly than internal medicine: that while the former has made great forward strides the latter has lagged far behind. This is a great mistake, for there is really only one science of medicine, made up of surgery and internal medicine, and their advance is simultaneous. The most accurate study of disease in all its manifestations has made modern surgery possible; the surgeon has made this knowledge of disease possible by the exploration during life. In other words, disease is studied on the operating, instead of the postmortem table. There can be no antagonism between the advanced internist and the modern surgeon—the advance depends on both.

The true physician to-day is not only versed in diagnosis and all therapeutic methods, but is thoroughly familiar with their limitations, and is as quick as the surgeon to recognize cases in which operative interference is the only remedy.

The subject to which your attention is invited to-day is tuberculosis of the kidney. This organ is affected in those cases of general tubercular infection where late in the disease any or all organs may be involved. It is not of this class of cases I wish to speak, as they are of scientific interest only, and there is little or no hope of doing anything to relieve the sufferer.

Tubercular disease of the kidney is primary, or the chief lesion, in quite a large number of cases. The frequency of these cases has been greatly underestimated, and if one is on the alert many more of them will be diagnosed early; if recognized early there is some hope of full recovery, and in all life can be prolonged. The surgical indications, while not altogether fixed, are clear in many cases: in fact, life and health can be saved by timely recognition of this malady.

This infection, in the vast majority of cases, is from the blood, the bacilli being deposited in the kidney from the circulation. Some authorities (Frank) deny that an ascending infection from the bladder, prostate or epididymis ever occurs, but the concensus of opinion is that this does occur in a small proportion of cases.

The disease in the kidney may be a small, circumscribed patch which causes no symptoms whatever, and is only found at autopsy. More frequently these foci develop, soften and discharge into the tubules of the pelvis of the kidney, to be evidenced by blood, pus and tubercle bacilli in the urine. As the disease advances, more of the kidney substance is involved and the organ is disintegrated and becomes a mass of tubercular deposit in varying degrees of degeneration.

Later, too, the bladder becomes involved, leading to extensive ulceration and destruction of the mucous membrane and deeper structures of this viscus. In some cases the true nature of the trouble is not suspected until the bladder symptoms are in evidence, the earlier symptoms having been so slight as not to arrest the patient's attention, or, if present, are mistaken for malaria, biliousness or other disorders.

ETIOLOGY.

This disease occurs more frequently between 20 and 40 years of age. I have had several cases in children, the youngest being 6 years of age. I have seen no case in which the disease began after the fiftieth year. Females furnish 75 per cent. of cases. Anything which produces congestion or irritation of the kidney is a predisposing cause, such as displacements, calculi, injuries, etc.

SYMPTOMS AND DIAGNOSIS.

While there are many symptoms which may be found at some time during the course of tubercular disease of the kidney, most of these are due to the advanced stages of the trouble, and are not of special value for early diagnosis. When the kidney is destroyed and the patient wasted with hectic fever, the diagnosis is not difficult. There are three cardinal symptoms, although not pathognomonic, either of which should attract our attention and demand a thorough investigation; these are polyuria, hematuria and pain.

Mr. M., aged 25, consulted me because he was passing too much urine; the quantity ranged from two to three quarts, the specific gravity was 1008 to 1012, it was alkaline, and contained a large amount of triple phosphates. Otherwise he was well and looked the picture of health; there was no history of tuberculosis in his family. Later pus in large quantities and blood appeared, and still later tubercle bacilli were found. Incision and drainage resulted in recovery.

If a patient is passing large quantities of clear urine, especially at night, and diabetes and hysteria are excluded, there is a strong suspicion of tubercular disease of the kidney.

Hematuria is the first symptom in most cases. A patient who has enjoyed good health after extra exertion passes bloody urine. The amount may be slight, but usually it is quite pronounced, and at times a free hemorrhage appears. This is usually without pain or other symptom, and in a few days disappears, to recur at variable intervals. These attacks may continue for years before other symptoms manifest themselves.

C. A. H., aged 52, consulted me for occasional hematuria. His first attack had been twelve

years previous, and was caused by lifting a heavy box. These attacks recurred at intervals of six to eighteen months, but gradually grew more frequent, and finally he had pain in the left kidney, and later pus was found, and still later advanced disease of the kidney, and finally general tuberculosis closed the scene.

Pain of a dull, aching character in one kidney is quite an early symptom, and often exists for years before other evidences appear. With this dull pain is soreness to pressure on the affected organ. Acute renal colic is rarely an early symptom, but does occur later when sloughs are thrown off. These pains have been mistaken for appendicitis in several cases I have seen, and in cases of suspected appendicitis this disease should always be thought of and excluded.

Mrs. S., aged 30, married, has suffered with pain in the right lower quadrant of the abdomen since childhood; this would continue from a few days to weeks. She had no dysuria, nor in fact any symptoms to suggest that the urinary organs were at fault. When I saw her she had quite a severe attack with fever; the diagnosis of appendicitis had been made, and I was asked to operate. The chronic course of the trouble led me to examine the urine, in which there was blood, pus and tubercle bacilli. The appendix was not involved.

It is well to bear in mind, however, that both diseases may coexist, as I have seen. If, therefore, a patient consults you with polyuria, at first acid, later alkaline, especially if there are phosphates in large amounts present, and attacks of hematuria with pain in either kidney, (more often the right, which is tender on pressure and perhaps enlarged), the existence of tubercular kidney is most probable, and a thorough study of the urine should be made. Later the pus will be constant and larger in amount. As a rule, blood corpuscles are not found constantly, but at times there is a distinct hemorrhage which may be very profuse. Single red corpuscles found constantly in the urine is rather an indication of stone than tubercular disease. Broken-down caseous material appears later. Tubercle bacilli may be found at any time when there is breaking-down, and can be demonstrated in 60' to 80 per cent. (Casper) of all cases.

When the symptoms point to the disease and the bacilli are not found in the urine, a positive diagnosis may be made by inoculating a guinea-pig. The negative result does not absolutely exclude the disease.

W. F., aged 35, tubercular family history, consulted me for hematuria in July, 1907; repeated urinary tests were negative; a guinea-pig test was made at the State Laboratory, with negative result. In July, 1908, there was a recurrence of

the hematuria, and tubercle bacilli in large numbers were found.

Acute hyperemia or nephritis affecting a movable kidney (Fenwick) may cause the pain and hematuria, but pus is not present and hyaline casts (rare in tubercular disease) are found. The tuberculin test will aid in the decision, but should not be given when both kidneys are involved, lest suppression occurs.

Pyonephrosis from blocking of the ureter, cystitis, secondary infections at various points of the body and other advanced symptoms need not detain us at this time, as they can be detected by the usual symptoms of those affected. A few cases fully recover, and I believe when the trouble is earlier recognized more cases will follow this course. The removal of the diseased part, either by nephrotomy and drainage or nephrectomy gives good results.

The prognosis is not so bad as formerly supposed, as many cases last for years without materially affecting the general health.

TREATMENT.

Very little is found on the medical treatment of this disease in the text-books. Hygiene and fresh air; in short, the usual care of tubercular diseases elsewhere is relied on by most authorities. Very little benefit can be expected from drugs; still there is some reason to think that guaiacol, if it does not interfere with the appetite, does some good. I have seen some cases improve under it, and Dr. Wishard thinks well of it. Urotropin has also been recommended (Casper). When the bladder becomes involved, local measures may give some relief, but many of our best authorities advise a general treatment by injection or applicators. In Germany irritation is generally used, while in England no local treatment is given. I must say, after observing both, it seemed to me the English clinics did the best.

The tuberculin treatment, since the studies of Wright, of London, have been given a new prominence. He has shown that by the use of smaller doses (1:1000 to 1:2000 of a milligram), repeated at intervals of a week or more, there develops in the serum of the blood, substances which are antagonistic to the disease. This method was in general use in London for most tubercular diseases three years ago, and the genitourinary surgeons thought well of it. I have been using it in a number of cases with good results in some. Dr. Wishard has also used it in quite a number of cases with most gratifying results.

It is too early to state the status of this treatment and just how far we are justified in postponing operative interference while using this treatment. I have some cases which are much better than they were a year ago and have during improvement advised its continuance. Those who have shown no improvement in three to six months I have subjected to a nephrectomy.

The indications for operation are not entirely fixed. Fenwick, Casper and others recommend early nephrectomy when the diagnosis is made. They argue that the proportion who recover will be small, and that it is safer to do the radical operation on these patients before other parts become involved. Bangs, after a thorough study of the subject, comes to the same conclusion. and Douglas, although he does not state on what he bases his figures, states the early operation "will permanently cure 55.5 per cent., prolong the life in 30 per cent., and perhaps abbreviate it by a few months in the remaining." This is a much better record than any expectant treatment can show, unless it be the tuberculin, and, as I stated, that is still unsettled.

I would advise, therefore, at this time, in these early cases, that this treatment be tried for three or four months. If at that time there is not a decided improvement an operation should be done. It goes without saying that at the same time extreme care should be given to hygiene and dietetics, and in every way the general health of the patient should be built up. Extensive disease of the ureter and bladder does not contraindicate nephrectomy, since these lesions often get well after the diseased kidney is removed.

Before operating it is necessary to ascertain with certainty which kidney is involved, and that the other kidney exists and is sound. Careful study of the urine, and in some cases that drawn from both kidneys by ureteral catheterization, is necessary. There is, however, danger of carrying infection to the good kidney, and if possible this should not be done. The cystoscope will often without ureteral catheterization give us the necessary information, the gaping or golf-hold ureteral orifice and infected cystic mucous membrane giving us positive indication of the seat of the disease.

NEWS, NOTES AND COMMENTS

DR. WILL SHIMER has given up his office in the Willoughby Building in Indianapolis to accept the place as chief pathologist to the State Board of Health, Dr. R. H. Rissler having resigned.

THE faculty and members of the graduating class of the Indiana School of Medicine were given a reception, smoker and dance last month at Dr. Fletcher's Sanitarium, Neuronhurst, on East Market Street, Indianapolis. The whole house was thrown open to the guests, as was the residence of the attendants and nurses.

AT ITS regular meeting, held March 9, 1909, the Fort Wayne Medical Society (the Medical Society of Allen County) amended its by-laws by raising the annual dues from \$3.00 to \$5.00, the new membership fee to begin Jan. 1, 1910, and to include the assessment of 50 cents per annum for the indigent fund which has been in existence for several years.

PROF. RAMON GUITERAS, of the New York Postgraduate Medical School, has been given leave of absence and is now on a scientific and hunting trip in Central Africa, going by way of the Nile and the Lakes. He plans to go north in time to attend the International Educational Congress at Buda Pest in early September, and to make some special study of graduate education as conducted abroad.

THE Indianapolis Medical Society has passed a resolution offering assistance to Dr. G. W. H. Kemper in his work of preparing the "Medical History of Indiana," now appearing in serial form in THE JOURNAL. The resolution is as follows:

Resolved, That the Secretary of the Indianapolis Medical Society be instructed to write to Dr. G. W. H. Kemper expressing appreciation of the research work he is conducting in connection with the Medical History of Indiana, and that the president of the society appoint a committee to complete the index of the Transactions of the Indiana State Medical Association, already carried up to the year 1900 by Dr. Kemper.

OWING to increased cost of necessities and decreased support, the managers of the Eleanor Hospital for children, Indianapolis, have decided to transmit their patients to the city hospital for the present, and have sold their equipment. At a meeting held in the Board of Trade assembly-room, which was attended by many prominent citizens of Indianapolis, Mr. Frank Van Camp, of the Van Camp Packing Co., was elected president of an organization formed for the purpose of providing a fund for a new children's hospital. Several thousand dollars have already been subscribed, and it is hoped that the legislature will assist in providing this hospital for children.

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EDITORIALS

**MARRIAGE REGULATION BY THE
STATE.**

A very wise measure is pending before the legislature of the State of Pennsylvania which, if it becomes a law, should react in a decidedly wholesome manner upon the morbidity and mortality of that commonwealth. The vital section provides that the clerk of the court "shall not issue any marriage license until each of the parties applying therefor shall severally present to the clerk a certificate, under oath of affirmation, from a medical doctor, duly authorized to practice medicine under the laws of the commonwealth, setting forth that he, the said medical doctor, does declare that to the best of his knowledge and belief the applicants for the license are not afflicted with pulmonary tuberculosis, epilepsy, insanity, imbecility, idiocy or other hereditary diseases, as such would affect the other contracting party to such a marriage or offspring therefrom."

It is to be regretted that the infection produced by Neisser's diplococcus is not included in the list in order that 20 per cent. of the blindness of the state might in time be wiped out and that 70 per cent. of the gynecologic operations might thus be averted. For although a thorough examination by the most competent physician, with a negative result for Neisserian infection, is not proof positive against the presence of the disease in latent form, yet the fact that an individual had to pass such an examination would doubtless be conducive to a decidedly more vigorous prophylaxis and continence on the part of many of our young men. And ultimately we might hope for the evolution of a race wherein a father would be above bartering his daughter's future health and happiness for the fortune of a roné—a soul for a mess of pottage—a condition not rare in the present greed for wealth. The plea of ignorance is no longer a legitimate excuse for a father of average intelligence and sufficiently mature to possess a daughter of a mar-

riageable age, for if he is unacquainted with the pathology wrought within the genital canal in woman by the gonococcus he is at least cognizant of the ubiquitousness of the infection among men. It becomes then his duty as a father, first, to obtain some reliable information concerning the damage of which this malady is capable, and, second, to assure himself that the man who marries his daughter is free from it. Such is the responsibility of the conscientious father of today, but a law compelling a man under oath to declare himself free and to submit to an examination by a thorough-going physician would relieve the father of some of this unhappy burden as well as exerting the desired prophylactic effect above mentioned. No disease to which man is heir is so readily transmitted from husband to wife and vice-versa, and none is hidden with more vigilant furtiveness, than this masked marauder of conjugal happiness.

If it be true, as is estimated, that 90 per cent. of our men have, or have had at some time, a gonorrhreal infection, it is high time that a government of the people, for the people and by the people stepped in and compelled its people to be decent, whether they want to or not, for no government can continue whose individual units are so oblivious to their own and their communities' interest as to render their future homes childless or their children blind.

THE COST OF TYPHOID.

In the *Charities and the Commons* (New York) Mr. Frank E. Wing, associate director of the survey, estimates the cost of typhoid in Pittsburgh for the year ending June 30, 1907, at something over \$3,000,000. The total of 1,029 cases in six wards occurred in 844 families, but 338 of which could be located five months after the close of the year. The analysis shows further that there were 2,045 individuals in these 338 families, or an average of 6.4 persons per family, and of these, 448, or 22 per cent., had typhoid within the year. The unusually low mortality is shown by only 26 deaths and 422 recoveries. The average loss of time to each of the 187 wage-earners was ten weeks, which represented an actual loss in wages to these patients of \$23,573.15. In addition 322 weeks of time and loss of wages resulted to those caring for the sick ones, bringing the total wage loss up to \$26,899.65. For the care of the 90 hospital patients \$2,332 was paid to the hospitals by full-pay patients, \$1,834.50 by either individuals or charitable organizations for the care of half-pay pa-

tients, making the total cost to the community for the 60 hospital full- and half-pay patients \$4,166.50. To this should be added another \$1,800 at least, for the actual cost to the hospitals of the maintenance of the half- and full-charity patients. For the care at home of the remaining 358 patients the expenses for doctors' bills, nurses, medicines and drugs, milk, ice, necessary extra servants and incidentals amounted to \$22,000.35.

Although the 26 deaths would have ultimately occurred from one cause or another, yet as they were obviously attributable to typhoid fever occurring within the period in question, it is but fair to include the funeral expenses and wage loss in the estimate. Adding \$3,186 for these funeral expenses, the grand total loss in wages and expenses foots up to \$56,252.50, or an average cost per typhoid patient of \$128 in wages and expenses.

From these figures for the six wards the typhoid loss to the whole city is computed. There were in 1907, 5,421 cases of typhoid fever in Greater Pittsburg, with a mortality of 622. At \$128 per patient the loss to the city in wages and expenses for the year amounted to \$693,888. Estimating the value of each life lost at \$4,000, the loss sustained by 622 deaths would be an additional \$2,448,000. So that in round numbers the minimum economic loss to the community of Greater Pittsburg in 1907 from typhoid fever alone reaches a total of \$3,142,000.

Now, for the sake of convenience, let us estimate the population of Pittsburg at 500,000, which for our purpose is approximately correct. Placing the above-computed cost of typhoid, in round numbers, at \$3,000,000, we find that each inhabitant of that city is paying \$6.00 per annum for the luxury of witnessing the prevalence of a preventable disease. If each such inhabitant would contribute one-tenth of such tribute toward increasing the sanitary forces of the city, he would be not only aiding materially in stamping out this one infection but many others which owe their existence to poor hygiene and sanitation, besides eliminating thousands of heart-aches.

And it is fair to presume that conditions are little, if any, worse in Pittsburg than they are proportionately in most of the populous districts of our country. It would seem that a few lessons in social economy might be in order to prove to the layman that he is not getting the full worth of his medical advice until he is more willing to heed it.

RIGHT OF AUTOPSY.

The Court of Appeals of Georgia has recently rendered a broad and sane verdict with regard to the right of the physician to hold an autopsy in a case in which he is seriously in doubt as to the cause of death.

The court held that "the plaintiff's contention that the body of his wife had been unlawfully mutilated to gratify professional curiosity was unjustified, and that, while the husband was entitled to the body, the laws of health, duly enacted in order that the living may be protected, are salutary and should be observed." In this case the plaintiff's wife, being ill, was taken by her family doctor to the charity ward of a hospital, where she was entrusted to the hospital surgeon. In a short time she died. It was necessary to ascertain the cause of her death in order to make a burial certificate. The hospital surgeon made a slight incision in the side of the corpse, which was sewed up and was not perceptible.

It is almost inconceivable to think that an individual would be so selfish as to begrudge an autopsy to an honest and conscientious physician who has put his best efforts upon a case and is still somewhat puzzled as to the exact pathology producing the fatal termination. On the contrary, common sense would suggest to a reasonable man that it was a matter of no small concern to his offspring to know exactly what killed their mother, both on account of the hereditary and environmental influences. A regard for the interests of a wife's other relatives would prompt the same course. And all this without any consideration whatsoever for the broader conception of the court, viz.: that of the common good. When an individual employs a physician to care for a member of his family who is seriously sick, it is presumed that the physician is called, in whom the patient, or the summoning relative, or friend, has most confidence, and the continuance of such employment to the termination of the case would seem to be presumptive evidence of continued confidence. Then, what excuse can legitimately exist for a sudden lapse of confidence when the doctor plainly states that, despite his best efforts, he is as yet unable to arrive at conclusions satisfactory to himself and to medical science, and for his own good and for the good of whosoever may sometime profit thereby, he asks the privilege of making a postmortem and is promptly refused? And yet this same proposition presents time and again to every practitioner of experience; indeed, it would be the course to be expected in a case of this kind, for it is no

toriously the fact that it is the man who pays his doctor the least who files the greatest objections to the treatment of a case.

Contrast the state of affairs in Austria, for instance, where practically every patient who dies comes to autopsy without any question or interference on the part of the relatives—indeed, it is taken for granted that an autopsy will be held—with that of our own country where, in the big majority of cases, autopsy is secured only after prolonged and earnest solicitation, if at all.

No conscientious physician feels at all satisfied to sign a death certificate without feeling reasonably certain of the cause of death, and, indeed, his course would seem perfectly justified in refusing to fill out such a certificate in case he were refused the opportunity of acquiring necessary facts obtainable only by a postmortem examination. If such rights were more generally insisted upon by the medical profession, our vital statistics would be considerably more complete and of much greater value because of their accuracy. And if there were a few more courts that rendered opinions as broadly humane as the one quoted, pathology would soon come into its own in our country.

OPTOMETRY LEGISLATION.

The opticians were no little concerned in the effort to repeal the optometry law passed two years ago. Their fears were groundless, for the last Indiana Legislature failed to give them a deserved rebuke.

The fact remains that the optometry law is pernicious in its influence and has been a detriment in many ways. It can be conclusively shown that the attempt to legally recognize the opticians as a profession has done nothing more than legalize the practice of a lot of pretenders who are conducting themselves as second-rate medical practitioners who are not required to go before the board of medical registration and examination.

The average optician, who since the optometry law was passed now calls himself an "eyesight specialist" and uses the prefix "Dr." before his name, presumes to say that his two to four weeks' course of instruction prepares him to do better work than the oculist who has studied the subject ten or twenty times longer, and he also presumes to recognize and diagnose pathological conditions of the eye which he glibly talks about to patient and seldom permits to escape without some medical treatment prescribed.

The fact that the optometry board is examining on the subject of pathological conditions of the eye emphasizes the belief that the working of the optometry law will foist upon the public a horde of fake "eye doctors" who will profit by their incompetency and aspire to be recognized as on a plane with the trained and educated medical man in the ability to recognize and treat diseased conditions of the eye.

We have no quarrel with the optician who attempts to fit glasses and makes no pretension to do anything else. But when he poses as one capable of judging when an eye is diseased or not, or assumes to give advice which only the medical man of long training and experience is qualified to give, we draw the line.

As an evidence of what is occurring in Indiana almost every day in like or similar form, we cite the following three cases which represent actual occurrences since the enactment of the optometry law:

(1) A woman of middle age consulted a prominent Indiana optician, calling himself "Dr." and advertising under the deluding title of "eyesight specialist," for failing vision and some slight redness of the eye thought to be due to strain which glasses would correct. The optician, true to his calling, gave glasses, but in addition gave some eye drops which he said were to cure the "granulated lids." As the woman got no better, but instead got rapidly worse, she finally consulted an oculist, who promptly discovered that the disease was glaucoma and that it was rapidly destroying sight.

(2) A man suffering from syphilitic macular chorioiditis was given glasses by an Indiana optician and told to use boracic acid lotions and hot applications "to stimulate failing vision." Later he was given a bottle of medicine which the optician said was for "kidney trouble," but would help the eyes. When seen by an oculist vision in one eye had been reduced fully three-fourths.

(3) A woman suffering from plastic iritis in both eyes was told by an Indiana optician that she had "blind cataracts," and he prescribed medicine for both internal and external use and kept the patient under his treatment until she was blind in both eyes.

Many more reports of similar character could be offered by our readers. Few such instances as mentioned occurred before the enactment of the optometry law. The opticians of the pre-optometry law period did not pretend to know anything about pathological conditions, and the people were not deluded into thinking that other than medical men possessed any knowledge of diseases

of the eye, and still less that others were qualified to treat the eye. The actual harm done by opticians previous to two years ago was infinitesimal as compared to the harm that is done now in the name of licensed optometry, which is nothing more than bastard medical practice.

Recognizing these facts, the medical profession has raised a voice of protest with a view to protecting the people from impositions practiced directly or indirectly under legal protection. The thread-bare argument that the medical protests come from the oculists for selfish reasons is not worth considering, for the oculists do as much work as they ever did; the opticians are making more work for the oculists; and it is safe to say that if the oculists really wished to compete with the opticians they could easily secure the lion's share.

Oculists are opposed to the operation of the optometry law because of the harm that has already been done and which was foreseen before the enactment of the law. They are opposed to any law which tends to produce any more pseudo-medical men than we have now, and they are opposed to legalizing a practice that should require the possession of a medical degree on the part of those who follow it. It is the height of absurdity for any man not possessing medical training and skill to pass an intelligent opinion upon conditions which pertain to or are associated with pathological changes, as it is also impossible for him to recognize and properly interpret existing pathological changes. Most of the opticians in Indiana to-day pretend to a more or less extent to do both. Therefore, the oculist believes that the optician's limitations should be recognized and that he be not legally empowered to attempt to do what is beyond his knowledge and training.

It may be too much to expect the legislature to pay serious attention to the arguments advanced by medical men in opposition to optometry legislation already in force, but it is the duty of medical men to make their plea. It means something more than an attempt to secure repeal of the optometry law, for it concerns the future of medical legislation as it pertains to qualifications for the practice of medicine. If the opticians under the protection of the optometry law can engage in a pseudopractice of medicine, what is to hinder them from going a step farther and securing legal recognition of that which many opticians are doing in direct violation of the present medical practice act? Some opticians are having the brazen effrontery to advocate the

enactment of a law providing that glasses shall be prescribed by the opticians only.

The condition is certainly one that not only carries harm with it in its present state, but offers increased danger for the future.

EDITORIAL NOTES

WE ARE constantly striving to make improvement in THE JOURNAL. We have always used a good grade of paper, but this year we are using a better grade. We wonder if any of our readers have noticed the change?

WHENEVER you buy instruments, drugs, appliances or anything for the office, make it a point to purchase of our advertisers, for they are helping you by advertising in THE JOURNAL, and, being trustworthy and responsible firms, are deserving of your patronage.

WE DESIRE to have always an accurate county medical society directory in THE JOURNAL. To accomplish this it is necessary to have the co-operation of county secretaries or members of the association. We will appreciate notice of warranted changes in the directory whether such notice comes from county society officers or from other members of the county societies. This also applies to the directory of district societies.

SINCE January 1 there have been a large number of new members of the association added to our subscription list. Many of the old members have not paid their dues for 1909, but we did not drop their names from the list until after the publication of the January number. The increase has been sufficient to exhaust our January number of THE JOURNAL, and we shall be unable to fill orders for that number unless we can procure extra January numbers from advertisers or exchanges where they are perhaps not quite as much in demand as with the members of our association.

The Journal of the New York State Medical Society is going to purge its advertising pages of objectionable advertising. We have wondered why this otherwise excellent journal should have carried objectionable advertising so long. The society has a large income from members, and a substantial reserve fund, so that there was every

reason why such a large and influential society should publish a clean medical journal and one that would be a credit to the medical profession of the State of New York. However, we are pleased to know that New York is following the example of Indiana and several other states in deciding to publish a journal that is clean and ethical from cover to cover.

WE HAVE recently received an envelope bearing a rather comprehensive card of a physician residing in one of our central Indiana towns. Without name and address the card is reproduced, and is as follows:

..... M.D.
General Office Practice,
Specialist
In all Diseases of
Eye, Ear, Catarrh, Kidneys, Lungs,
Lumbago and Rheumatism.
Glasses Correctly Fitted.
520 South Washington Street,
Ind.

Surely such an announcement, conspicuous and suggestive in more ways than one, ought to bring results of some kind.

SINCE the change in the by-laws of the state association fixing the fiscal year from January 1 to December 31 inclusive, and requiring the payment of the annual dues on or before February 1, it becomes necessary for the county societies to so change their by-laws that there will be no conflict with the state association by-laws. We believe that it would be better if every county society held its annual meeting early in December, and at that meeting new officers be elected and dues collected for the ensuing year. Members should be urged to pay their dues at the December meeting so that their membership in the state association and subscription to THE JOURNAL shall not lapse. It is just as easy to pay dues at the appointed time as to pay them later as delinquent dues, and promptness in the payment of dues will save county secretaries, the state secretary and the office force of THE JOURNAL much work.

THE JOURNAL carries only the highest grade of advertising. Some advertisers fail to appreciate the fact that some of our readers can patronize an advertiser of THE JOURNAL without mentioning the fact that THE JOURNAL has been responsible for the patronage. For the purpose of showing those advertisers their error we suggest that members mention THE JOURNAL when

patronizing advertisers. One of our influential members has recently forwarded a copy of a letter which was sent to D. Appleton & Company of New York City. The letter is as follows:

D. Appleton & Co., New York City, N. Y.:

Dear Sirs:—Please send me subject to my inspection and approval one copy Keyes on G. U. Diseases (last edition) and one copy Bauman's Diagnosis and Treatment of Gonorrhœa.

Your sale of these books depends entirely on the neat little advertisement you carry on the cover page of our JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION.

Very truly yours,

We wish that more of our members would think to help THE JOURNAL by writing such letters as the above when placing orders with advertisers. The advertiser is satisfied if he knows that his advertising has even brought an inquiry, and many of our members who forget THE JOURNAL can help us by mentioning THE JOURNAL when dealing with firms advertising with us.

THE detail man from a Chicago manufacturer of pharmaceutical specialties is now canvassing Indiana introducing a new specialty having many reputed "cure all" features. When asked if the preparation had been approved by the Council on Pharmacy and Chemistry he replied that it had not been approved, and that he did not care to talk with a physician who had to be told by a bunch of fools in Chicago as to what should and what should not be prescribed. This is a very clear indication that the firm and its preparations are unworthy of the confidence of progressive and reputable men. It can be taken as an established fact that any firm or any man who is fighting or damning the Council on Pharmacy and Chemistry is doing so because the product or products which they or he represent will not stand the light of honest investigation, for no reputable firm objects to the work of the Council on Pharmacy and Chemistry, and many firms not only seek the approval of the Council for their products, but do everything in their power to encourage the Council in its splendid work. Every progressive physician should avoid patronizing the firms that are loudly decrying the work of the Council, for such firms are invariably imposing upon the medical profession and attempting to avoid investigation of their methods.

MANY doctors in Indiana are dispensing their own drugs. Not a few of these doctors are buying their drugs of jobbing houses or manufacturers who sell goods of inferior quality some-

times at a cheap price, but more often at a price which should procure goods of standard quality. It is surprising how many firms of this character there are who cater almost exclusively to physicians, and it is equally surprising how gullible physicians are in giving their patronage to such imposters. The doctor who would do himself and his patients justice must procure drugs of standard quality, and to be on the safe side his patronage should go to reputable houses known to manufacture or sell only goods of approved quality. If there is any doubt as to what firms should be patronized, the matter can be easily settled by referring to the advertising pages of THE JOURNAL. Several houses of established reputation making goods of unquestionable quality are advertising in THE JOURNAL. Their goods can be either bought direct or by specification can be purchased through the ordinary jobbing houses. There are many other houses who do not advertise with THE JOURNAL who manufacture equally as reliable goods, but Indiana physicians can make no mistake in patronizing THE JOURNAL advertisers, and in turn they will be helping THE JOURNAL.

IT IS reported that two firms in Indianapolis making proprietary preparations, which they advertise in extravagant terms, are claiming that the reason their preparations have not been approved by the Council on Pharmacy and Chemistry is because the Council has not had time to get to their preparations and approve them. Nothing could be further from the truth, and the physicians of Indiana should not be led astray by such false and misleading statements. No pharmaceutical specialty manufactured in Indiana has been offered to the Council and not received the attention deserved either by acceptance or rejection. Several proprietaries advertised most extensively and for which unwarranted claims are made have been rejected by the Council, and two of these in particular are the ones which it is now claimed the Council has deferred action upon. We suggest that the better plan to pursue in the prescribing of proprietaries is to make sure that the Council has approved the preparation which you are to use. If a firm has any preparations that have been approved they are very anxious to let you know the fact. If not approved, the firm or its detail men will say that the preparation is in the hands of the Council, that it has been approved, or that it has not been approved and they do not care for the approval. The best thing to do is to demand evidence to the effect that the preparation has been approved before you give it consideration.

ON FEBRUARY 15 the circuit court at Columbia City fined John W. Hartzog, an optician of Fort Wayne, \$25 and costs, amounting to \$39.90, for practicing medicine in Churubuseo without a license from the State Board of Medical Registration and Examination. It is reported that Hartzog has been openly practicing medicine for many months, and has even had the audacity to advertise as a doctor, and to treat diseased conditions of the eyes. If his prosecution and conviction results in a warning to many other opticians in Indiana who are also grossly violating the medical practice act, the work of the Board of Medical Registration and Examination in successfully prosecuting Hartzog will be of signal benefit to the public. It is a comparatively easy thing for the registered opticians who now call themselves "eyesight specialists" and adopt the prefix "Dr." to slip into the practice of prescribing for diseased conditions of the eyes. The result is far-reaching in its evil effects for the reason that many serious eye diseases are thus kept from having appropriate treatment, often until too late to secure the benefit which could be obtained if proper treatment was instituted at an earlier date. The sooner the optician is made to suffer the penalties of the law governing the practice of medicine in Indiana, the better it will be for those suffering from eye diseases who are led astray by the misrepresentations and quackery of that portion of the registered opticians who are posing as eyesight specialists and intimating that what they do not know about the pathology of the eye is not worth knowing.

DR. KATHERINE L. STORM, of Philadelphia, who devised and manufactures the Storm abdominal supporter used after operations for intra-abdominal troubles, and advertised in this journal, announces that she sells her supporters on their merits, and does not buy the endorsement or commendation of physicians who write her that she has the best supporter on the market and that they will regularly prescribe it providing a substantial cash payment or a commission upon sales is given them. Some doctors have boldly suggested that the price should be raised so that the medical profession can have a "rake off." The prescribing of the supporter would thus mean that it is not a question of giving the patient the advantage of the appliance because of its merit, but rather giving the doctor the advantage of the sale of it, and the patient the blessed privilege of contributing unnecessarily to the bank account of the grafting doctor. We are pleased to know that Dr. Storm, who does

not have to buy endorsement of the supporters she sells, having established a reputation and sale for them on their merits, has refused to be a party to what, in our judgment, is clearly a case of professional sandbagging.

"What do I get out of it?" is a frequent saying of many petty grafters in the medical profession. We hear it from the lips of the young graduate who is asked to conduct an autopsy, and we hear it from the sordid doctor who takes a case to a surgeon or specialist for operation. The druggist hears it from the doctor who expects a profit from his prescriptions, and the hospitals and sanatoria hear it from the doctor who asks a commission for referring patients for treatment. Some men consider the practice of medicine as a licensed and respectable means of robbery, and the patients as the legitimate prey. The question, "What does the patient get out of it?" is not considered.

This grafting has reached a point where it is a disgrace to the medical profession and threatens to seriously disturb the confidence and respect accorded medical men by the laity. In some localities these practices have already become the subject of public discussion, to the serious detriment of the medical profession in the community. If the public once generally learns the facts, it is safe to say that there are not a few medical men who will seriously suffer in consequence. It is time for a change in the practices of the guilty, and an awakening of that conscience which tells us to refuse to do those things which we know to be morally wrong.

CORRESPONDENCE

THE PROGRAM OF THE TERRE HAUTE SESSION.

To the Members of the Indiana State Medical Association:—The committee on scientific work for the Terre Haute session is desirous of providing a program which will be of interest to all the members of the association.

At many of our previous sessions, especially those of recent date, so many papers have been referred that the program has been overcrowded and it has been necessary to cut short the time allowed for discussion, which, in the opinion of many, is the most instructive part of the scientific work, this, too, notwithstanding the fact that many whose names have been included have not been present. This is not doing justice to either the essayist or to those who participate in

the discussions, and your committee, acting both upon the authority of the by-laws and under instructions of the Council, has decided to limit the number of papers to thirty, ten to be presented before the Medical Section, ten before the Surgical Section and ten before the general meetings.

So far as it is possible to arrange it, presentations made before the general meeting will be in the form of symposia upon topics of both medical and surgical interest, and it will be our endeavor to avoid unnecessary overlapping in the subjects treated. Other things being equal, preference will be given to authors in the order of precedence of their contributions, with due regard to geographical distribution. The Council has further decided that all papers to be read at the annual session must be in the hands of the secretary, Dr. F. C. Heath, Newton Claypool Building, Indianapolis, Ind., not later than July 1, and that they must be typewritten and accompanied by a synopsis of not more than 100 nor less than 50 words. It will not be required that papers should be presented first before the county society, nor that they be officially referred, although it is preferred that papers sent to the state association have the endorsement of the county organization.

Physicians desiring to contribute to the program of the Terre Haute session will please send in their applications as early as possible in order that a provisional schedule may be arranged, and it is earnestly hoped that those assigned to places on the program as essayists or as leaders in discussions will realize their obligation to be present when the papers or discussions are called

Very respectfully,
JOSEPH RILUS EASTMAN,
A. C. KIMBERLIN,
F. C. HEATH, *Secretary,*
Committee on Scientific Work.

INFORMATION WANTED.

MUNCIE, IND., March 1, 1909.

Editor The Journal:—In the Transactions of the State Medical Association for 1907, page 483, Miss Nena Flover, who writes her father's—the late Dr. Thomas W. Flover—obituary notice, says: "He kept a record of the proceedings of the state association for eight years, and later had them bound in one volume, which volume he presented to the State Medical Association."

Can some reader of THE JOURNAL tell me who has this volume? I am anxious to look it over for historical matters. G. W. H. KEMPER.

DEATHS

DR. DAVID L. TROWBRIDGE died February 22 at his home in Muncie.

DR. C. HICKS, a member of the Indiana State Medical Association and the A. M. A., died at his home in Mount Vernon, Ind., January 12.

DR. RICHARD R. SIGLER, a graduate of the University of Louisville, Ky., 1882, died at his home in Ramsey, Ind., February 7, from pneumonia, aged 70.

ROBERT J. CLARK, M.D., one of the oldest doctors in White County, died March 1, 1909, from malignant disease of the prostate, followed by uremia and convulsions, at his home in Monticello.

DR. ANTHONY H. BRYAN, an honorary member of the Indiana Medical Association, and a graduate of the University of Louisville, Ky., in 1857, died at the home of his son in Evansville, February 8, from senile debility, aged 76.

DR. L. J. WEINSTEIN, a prominent gynecologist of Terre Haute, ex-president of the Vigo County Medical Society, founder of the Union Hospital, former member of the city and county councils and of the city and county boards of health, died Feb. 17, 1909. He was born Jan. 19, 1848, graduated from the Miami Medical College in 1874 and practiced in Terre Haute since 1878.

PERSONALS

DR. THOMAS MACER, Evansville, has been seriously ill with septicemia.

DR. DAVID C. RONEY, Milan, is spending this month and April in Florida.

DR. E. W. HOPKINS, formerly of Dubois County, has located at Wadeville.

DR. JAMES M. PINKSTON, Holton, has been elected coroner of Ripley County.

DR. E. V. BORAM, of Anderson, has located at Markleville, Ind., his former home.

DR. ROY BEN CRABILL has recently moved from New Lisbon to Broad Ripple.

DR. CLARENCE G. REA has been made secretary of the Muncie Board of Health.

DR. J. W. PETITJEAN, of St. Wendel, has removed to Warrenton, Gibson County.

DR. WILLIAM G. RALSTON, Evansville, has just celebrated his ninetieth birthday.

DR. RAYMOND A. AKIN, of Bloomington, has located permanently in Bedford for practice.

DR. W. E. RISINGER, formerly of Bedford, has removed to Dayton, Ohio, where he will practice medicine.

DR. CHARLES E. COTTINGHAM, Indianapolis, has changed his residence to 2142 Broadway, Indianapolis.

DR. WILLIAM P. RICHARDS, New Albany, has succeeded Dr. William L. Starr as coroner of Floyd County.

DR. T. J. TONER, Gary, has been appointed local surgeon for the Chicago, Lake Shore and South Bend Railway.

DR. K. C. FITZGERALD and Miss Nelligene Schnee, both of New Harmony, were united in marriage February 23.

DR. FRANK B. WYNNE, Indianapolis, has been lecturing before several clubs and societies on the Emmanuel Movement.

DR. J. WILLARD PARRISH, for the past year secretary of the Shelby County Medical Society, has been ill for the past three months.

DR. GEO. F. EDENHARTER has succeeded in securing an appropriation for the purpose of building a chapel at the Central Insane Hospital.

DR. F. L. STALLINGS, of New Harmony, has gone to Louisville, where he will review medicine. Later he will take postgraduate work in Chicago.

DR. W. T. DODDS and Dr. F. L. Truitt, who have offices at 115 East New York Street, Indianapolis, will shortly move to 320 North Meridian Street.

DR. DAVID F. BERRY, 923 Indiana Pythian Building, Indianapolis, has given up general practice to devote himself exclusively to nose, throat and ear.

DR. H. E. FIGG, of 1025 North Illinois Street, Indianapolis, will give up the practice of medicine for the purpose of entering the real estate business in Texas.

DR. O. H. SWANTUSCH, formerly of Metz, who has been in partnership with Dr. W. F. Shumaker, of Butler, for a short time, has returned and again taken up his practice in Metz.

DR. HARRY C. SHARP, 316 Board of Trade Building, is the Indianapolis correspondent for THE JOURNAL, and to him all Indianapolis news notes and items of interest should be sent.

DR. JOHN J. KYLE, of the Newton Claypool Building, Indianapolis, was elected surgeon general of Indiana Commandery of Military Order of Foreign Wars at its annual meeting March 23.

DR. MARY A. SPINK and Urbana Spink, Indianapolis, gave a reception the last week in February at Neuronhurst to the faculty and students of the medical department of the Indiana University.

DR. B. F. BROWN, 2507 Gale Street, Indianapolis, is being talked of as a candidate for mayor on the Republican ticket. Dr. Brown has been prominent in sanitary work since his election as councilman.

DRS. OSCAR S. DEITCH, Indianapolis; Jeremiah A. Swailes, Acton; R. Samuel Records,

Lawrence, and William B. McDonald, New Augusta, have been appointed deputy coroners of Marion County.

DR. E. B. MUNFORD, 2403 College Avenue, Indianapolis, has been put in charge of all infectious diseases by the Board of Health of Indianapolis, and will work in connection with the medical inspectors of the public schools.

DR. U. G. WHITING, of New Harmony, after taking up postgraduate work in Chicago, has gone abroad to take a preparatory course on diseases of the eye, ear, nose and throat, in which branch he expects to specialize after his return.

DR. JOHN M. KITCHEN, 239 North Pennsylvania Street, Indianapolis, who has recently recovered from a long illness, will soon erect a business block for the use of physicians and dentists at the corner of Pennsylvania and New York Streets.

DR. CHARLES HUMES, Indianapolis, in replying to a toast at the Phi Chi banquet at Indianapolis, advocated the building of a chapter house for the fraternities in Indianapolis, to be open to all Phi Chi medical students and alumni in Indianapolis.

DR. J. L. McMasters will move from the corner of Pennsylvania and New York Streets to 320 North Meridian Street. All these gentlemen have been forced to change their offices on account of the new office building being erected by Dr. Kitchen.

DR. E. W. WALES, DR. E. O. Lindenmuth, DR. J. R. Thrasher, DR. H. C. Waterhouse and DR. H. C. Parker, all of whom had offices at 320 North Meridian Street, Indianapolis, have taken suites together on the fourth floor of the Board of Trade Building.

DR. HOMER I. JONES, of 22 West Ohio Street, Indianapolis, who is lieutenant colonel and chief medical officer in Indiana National Guard, has been honored by having his scheme of monthly examinations for medical officers of the guard adopted by the medical department of the United States Army.

DR. F. W. FOXWORTHY, Indianapolis, was elected secretary of the Indiana Commandery of the Military Order of Foreign Wars at their annual meeting, which was held at the Denison March 3. Dr. Foxworthy has changed his residence from Central Avenue and Twentieth Street to Central Avenue and Twenty-third Streets, Indianapolis.

DR. R. O. McALEXANDER, Indianapolis, who has had his residence and office at Sixteenth and New Jersey Streets for many years, has sold the same to Dr. W. H. Foreman, who will occupy the same for his residence and office. Dr. Foreman formerly had his office and residence at 1716 East Washington Street. Dr. McAlexander has moved his office to 320 North Meridian Street.

DR. JOHN N. WALLACE, of Franklin, who has been captain and assistant surgeon in the National Guard, has taken the examination and will soon be commissioned as major. His probable assignment will be to the hospital corps, vice Major E. F. Sommers, of Greenfield, resigned. Dr. Sommers has been in failing health for some time, and has given up his practice entirely to enter a sanatorium in Indianapolis for treatment.

DR. J. A. McDONALD, the new president of the Younger Physicians Club of Indianapolis, secured Dr. F. S. C. Wicks, pastor of the Unitarian Church, to deliver his paper on the Emmanuel Movement before the club at their February meeting. Dr. A. W. Brayton and Dr. H. C. Sharp discussed the question from a medical standpoint. Dr. Wicks' conclusion was that it is best for preachers to practice preaching and physicians to practice medicine.

NEWS, NOTES AND COMMENTS

OFFICIAL "tag day" in Bedford and Oolitic, for the benefit of the charity ward of the new Bedford Hospital, netted nearly \$1,000.

THE little daughter of Dr. J. T. McFarland, of Williams, who recently underwent an operation for appendicitis, is slowly recovering.

A NEW building, planned primarily for physicians and dentists, is to be erected on North Delaware Street, just above Massachusetts Avenue, Indianapolis.

THE Fort Wayne Academy of Medicine and the Blackford Law Club are arranging for occasional joint meetings for purposes of mutual instruction and profit.

THE board of managers of the Eleanor Hospital for Children, Indianapolis, has decided to close the present building on account of its inadequacy and insanitary condition.

THE new officers of the Howard County Medical Society for 1909 are as follows: President, O. P. Kemp; vice-president, J. O. Garr; secretary-treasurer, Will J. Martin.

THE physicians of Anderson entertained Dr. J. N. Hurty, of Indianapolis, at a banquet about February 20, at the Grand Hotel. The address of the evening was by Dr. Hurty.

BY INVITATION of the Owen County Medical Society Dr. Wynn, of Indianapolis, delivered an address at a union meeting of the churches of Spencer at the Methodist Church, February 7, on the subject "Relation of the Church to Modern Healing."

IT BECAME necessary for the Delaware County Board of Health to resort to legal processes in order to stamp out the scarlet fever epidemic in that county which raged during the month of January. Persons who carelessly ran in and out of houses where scarlet fever was prevalent, then going to their homes, were arrested as fast as the fact was discovered.

MRS. BATES, wife of Dr. J. W. Bates, of Broad Ripple, died at her home January 30. Death was due to phlegmonous gastritis following ptomaine poisoning. Mrs. Bates was an untiring worker in the pure food ranks, and had the honorable distinction of being the only woman in the government employ of Canada working under the superintendent of domestic science of the Dominion.

THE Eighth Councilor District Medical Society will hold its spring meeting at Winchester on April 22. At that time the society will consider the subject of "Therapeutic Suggestion," Dr. E. H. Lindley, professor of philosophy at Indiana University, discussing the "Psychologic Aspects." Dr. Frank Wynn will discuss its "Remedial Value and Dangers." Rev. Peir, of Union City, will talk on "The Emmanuel Movement."

THE new Bedford City Hospital was formally opened to the public on Friday, February 19, though the institution has been open to patients since December, 1908. Although small, the hospital is bright and clean, and has been well filled with patients most of the time since it was opened. Miss Catherine Hubric, a graduate nurse of Louisville, has been placed in charge as superintendent, and Mrs. Elizabeth Donihue, of Bedford, matron.

DR. ROSS H. RISSLER, who has been in charge of the laboratory of the State Board of Health, has resigned to accept the position of civil health officer in the Philippines. He will sail from San Francisco March 9. Dr. Rissler has done excellent work and will be greatly missed, his work on rabies being especially noteworthy. On Tuesday, March 2, he was united in marriage to Miss Emma Boeling, of Logansport, who will accompany him to his island home. The medical service in the Philippines offers a greater field of experience for young men than any other service except the army in time of war.

SINCE the publication of *New and Nonofficial Remedies*, 1909, the Council has acted on the following products:

- Articles accepted for N. N. R.:
 - Brovalol (Schering & Glatz).
 - Medinal (Schering & Glatz).
 - Veronal Sodium (Farbenfabriken of Elberfeld Co.).
 - Agurin Tablets, 5 grs. (Farbenfabriken).
 - Citarin Tablets, 15 grs. (Farbenfabriken).
 - Hedonal Tablets, 8 grs. (Farbenfabriken).
 - Iodothyrine Tablets, 5 grs. (Farbenfabriken).
 - Novaspirin Tablets, 5 grs. (Farbenfabriken).
 - Piperazine Tablets, 16 grs. (Farbenfabriken).
 - Sajodin Tablets, 8 grs. (Farbenfabriken).
 - Acet-Theocin-Sodium Tablets, 4 grs. (Farbenfabriken).
 - Veronal Tablets, 5 grs. (Farbenfabriken).
- Articles accepted for N. N. R. Appendix:
 - Tabloid Coffee Mint (Burroughs, Wellcome & Co.).
 - Maltine (Maltine Co.).
- Articles reconsidered and rejected:
 - Migrainin (Koechl & Co.).

ABSTRACTS FROM CURRENT MEDICAL LITERATURE

Among the newer subjects discussed at the recent International Congress on Tuberculosis, none received more notice than the mercurial treatment of tuberculosis as presented by Surgeon Barton B. L. Wright, in charge of the United States Naval Hospital, New Fort Lyon, Las Animas, Colorado. His first investigations began at Pensacola, Florida, in 1905, where he treated a number of tuberculo-syphilitics and observed that the pulmonary lesions improved more rapidly than before known in that climate. A mixed treatment of 1 20 grains of bichlorid of mercury with 5 grains of potassium iodid was given three times daily. Upon returning from sea duty in 1907 and assuming charge of the Naval Tuberculosis Hospital in Colorado, he again took up the mercurial treatment. In two papers, printed in the United States Naval Medical Bulletin, and now obtainable from the government printing office, Washington, and in a later article in the *New York Medical Journal* of Aug. 29, 1908, he reports a long series of accurate case records. His concluding words are:

First.—We have shown the almost immediate improvement in the general condition of the patient, following the administration of mercury; the slowing of the pulse, the reduction of temperature, and the gain in weight.

Second.—We have conclusively demonstrated that it will cure extremely advanced tubercular ulceration of the larynx and pharynx in a remarkably short period of time.

Third.—We have shown that it produces marked improvement in advanced pulmonary lesions, and that it has also a decided beneficial action on tubercular glands.

Fourth.—That the drug has a direct destructive action on the tubercle bacillus seems most probable judging from the laboratory reports upon sputum submitted for examination.

Dr. Wright emphasizes that large and increasing doses of mercury are necessary; that tuberculous patients are more tolerant of the drug than syphilitics, and the more advanced the tuberculous lesions the greater the tolerance. The claim of such a careful observer that "in mercury we have a specific for tuberculosis" is sufficiently startling and important to present his method of administration.

The preparation of mercury used is hydrargyrum succinimidum. Just before the injections are to be given distilled water is boiled for at least twenty minutes. A solution is then made so that 0.64 c.c. (min. x) will be equivalent to gram 0.013 (gr. 1/5) of mercury succinimide. The syringes and needles are boiled for twenty minutes.

The skin of the patient's buttocks is scrubbed with hot water and tincture of green soap, then washed with alcohol, followed by ether, and this in turn by a solution of bichlorid (1-3,000). The surgeon's hands are prepared as for any operation, and sterilized rubber gloves are worn. The patient being in a prone position on the table, the needle is drawn deeply into muscle tissues by a quick downward plunge. If no blood escapes from the butt of the needle the syringe is put in place and the drug injected. If blood escapes a vein has been punctured, and the needle is, therefore, withdrawn and inserted at another place.

It has been our custom to start with gram 0.013 (gr. 1/5) of the drug, and to repeat the injection every other day until fifteen injections have been given; then to give gram 0.026 (gr. 2/5) every fourth day until fifteen more injections have been administered; then to give gram 0.039 (gr. 3/5) once a week indefinitely. It is advantageous in some cases to give short courses of potassium iodid at varying intervals in conjunction with the mercury.

The above procedure can not be considered a hard-and-fast rule of routine, for some cases require larger doses and some smaller, and in this the physician must be guided by experience and close observation.

We have now over 1,100 injections without a single abscess, and we have struck but five veins.

Now and again in one or two cases it has been found impossible, for various reasons, to administer the drug by injection, and in these cases mercury has been given by mouth in the following combination:

Hydrarg. chlor. corros..... 0.324 grams

Tr. gentian. comp..... 240.00 grams

M. Sig.—Teaspoonful in wine glass of cold water t. i. d. twenty minutes before meals.

This prescription has given excellent results, but does not act so rapidly as the injections.

The introduction of the needle is hardly felt; in about 50 per cent. of the cases, shortly after injection, the region becomes slightly painful, and for several hours feels as if it was badly bruised, after which time this sensation gradually passes away. Occasionally a feeling of soreness persists for twenty-four hours.—*Texas State Journal of Medicine.*

SOCIETY PROCEEDINGS

ALLEN COUNTY

FORT WAYNE MEDICAL SOCIETY.

(Meeting of Jan. 26, 1909.)

Society met in regular session with thirty-three members present. Minutes of previous meeting read and approved.

Rapidly Fatal Mania.—Clinical case report by Dr. G. W. McCaskey. Patient, woman, aged 37. Health fairly good, except that family thought she acted peculiar, and one month before death she ceased menstruating, three weeks later flowing severely. Seemed as well as usual. Twenty hours after first attack was in raving condition; no cause. Died in forty-eight hours.

Cirrhosis of the Liver and Extensive Ascites.—Case report by Dr. McCaskey. Adhesive peritonitis developed between the liver and peritoneum, a sudden diuresis occurred and the ascitis disappeared.

Herpes Zoster.—Dr. W. D. Calvin reported seeing two cases in one day, and asked if any other of the members had seen the condition lately, possibly establishing that there was an epidemic.

Appendicitis was the title of a paper by Dr. B. Van Sweringen, in which he said that a diagnosis of appendicitis, especially in chronic cases, is not always easily made. He spoke on the necessity of complete hemostasis. Morris operates as soon as diagnosis is made. The advantages of closing without drainage are: shorter convalescence, and avoidance of the danger of hernia.

Discussion by Drs. Greenawalt, Porter, McCaskey, Calvin, Rosenthal and Wheclock. Closed by Dr. Van Sweringen.

Colitis was the title of a paper by Dr. C. C. Kimmel, in which he said that colitis may be acute or chronic, primary or secondary, and presented in detail the disease and its complications, taking into consideration the etiology, clinical history and symptomatology, of ulcerative colitis and membranous colitis. The prognosis is usually not grave, unless in the more advanced stages complicated with digestive disturbances.

Discussion was opened by Dr. Drayer, who said that the ulcerative type may be syphilitic, and hence may be cured by specific treatment. Dr. McCaskey said that oil injections are of benefit. Dr. Squires said that irrigations are useless after the bowels are clean. Discussion closed by Dr. Kimmel, who said that the use of silver nitrate and astringents and antiseptics are being dispensed with, and mild antiseptic powders applied with the proctoscope.

Dr. E. M. Van Buskirk, chairman of the committee on delinquent list, presented his report, which was adopted.

Dr. W. D. Calvin moved that \$5 membership fee be substituted for \$3 in the constitution. Resolution carried over.

Adjourned.

CHAS. G. BEALL, Sec. Pro Tem.

(Meeting of Feb. 1, 1909.)

Society met in special session February 1 in the Coroner's office to take action on the death of Dr. H. G. Nierman, with twenty-six members present. Dr. Wheclock made motion, which was seconded and carried, that the usual floral offering be sent and a committee on resolutions be appointed. Honorary pall-bearers were appointed. Motion made and carried that the society meet at Court House at 8:30 a. m. and proceed in a body to the Cathedral.

Dr. E. A. Crull made a motion, which was seconded and carried, that the society send flowers to Dr. Edward F. DeVaux, who is at present confined to his bed at the Fort Wayne Hospital. Committee instructed to purchase flowers for Dr. DeVaux.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of February 2.)

Society met in regular session, with thirty-five members present. Minutes of previous meeting read and approved.

Meckel's Diverticulum.—Dr. B. Van Sweringen presented a case of Meckel's diverticulum which had become strangulated on account of a twist in the pedicle by which it was attached to the bowel. The diverticulum was attached also to the belly wall, and this attachment was twisted. The symptoms produced were sudden onset of severe abdominal pain, tenderness in right iliac region and rigidity of the right rectus, together with a mass in that region, upon which a diagnosis of appendicitis was made.

Discussed by Dr. Duemling, and closed by Dr. B. Van Sweringen.

Dr. H. A. Duemling presented two pathological specimens, the first, a fibroid of the ovary, of interest because of its size; the second, papillary malignant diseases of the ovary, with general carcinosis.

Motion made by Dr. Porter that Dr. McCaskey, as executive member of the Library Association, be instructed to write the trustees of the Public Library,

saying that they have failed to live up to contract promptly concerning taking care of binding and cataloging medical books. Carried.

Medical Fraternity was the title of a paper by Dr. W. P. Wherry, in which he said that there is a lack of a spirit of true fraternity in the medical profession, resulting in a depression of its status in the community and nullifying attempts at improvement. The remedy is such an organization of licensed physicians, general practitioners especially, as would enable them to introduce better conditions in their professional life.

Discussion by Dr. Wheelock, in which he said that there is more harmony at present among physicians than ever before. Quacks should be suppressed for the good of the laity. The physician doesn't use the power he has in public affairs for fear he will be accused of attempting to push his private interests.

History of Medicine was the title of a comprehensive paper by Dr. C. W. Gordon, in which he cited the various steps that have been taken from time to time in attaining the present plane on which the science stands.

The committee on resolutions on the death of Dr. Nierman reported, and report was adopted, copies being sent to the family, entered on minutes and published in the newspapers.

Auditing committee reported that the books and vouchers for 1908 were correct. Report was adopted and committee discharged.

Dr. Beall, chairman of the committee, authorized to purchase and distribute copies of "The Great American Fraud," reported task finished, and committee was discharged.

Motion made and carried that chair appoint one member of society to attend and represent the society at meeting of Woman's Civic League one week from Monday night at Public Library concerning Children's Public Playgrounds. Dr. Porter appointed.

Adjourned. J. C. WALLACE, Sec.

(Meeting of February 9.)

Society met in regular session at St. Joseph Hospital, with thirty-two members present.

Telangiatic Tumor of the Face.—Clinical case report and patient presented by Dr. M. I. Rosenthal. He said he feared to inject steam on account of danger of embolism. Had the Sister make pressure around point of injection to avoid embolism. Presented photograph showing the growth as large as fist. Very little deformity at present.

Cancer of the Lower Lip.—Case report by Dr. Rosenthal. Cancer removed with electric cautery and electric clamp. Trouble started six years ago from an injury, which never healed, and one year ago began to take on tumor formation. He demonstrated the cautery and clamp outfit.

Fracture of Tibia and Fibula, Lower Third.—Case 3. Treated by internal plaster splint.

Resection of Eighteen Inches of Bowel for Tubercular Peritonitis, fibroid uterus and pyosalpinx also present. Placed drain and got fecal fistula. Opening closed and will remain so. Facilitated operation on fistula by previous injection of methylene blue solution.

Dr. Bulson presented a case in which eye was injured by a limb striking in the eye, resulting in abrasion of cornea and rupture of the anterior capsule, allowing aqueous humor to come in contact with the crystalline lens. Lens removed with iridectomy. Pa-

tient could see very little after operation. Ophthalmoscopic examination showed cupping of optic disc and detachment of retina with rupture from hemorrhage. Small cystoid scar from protrusion of iris in scar on coloboma.

Case 2.—Patient with rupture of lens following trachoma and entropion. Had operation in Russia. Has blepharophimosis from erosion by tears and secretions; pannus and old corneal ulceration. Other eye was injured by emery dust, and this produced exacerbation of the condition.

Luncheon by the sisters. Vote of thanks extended. Adjourned. J. C. WALLACE, Sec.

(Meeting of February 23.)

Society met in regular session, with twenty-one members present.

Dr. M. I. Rosenthal reported a case of resection of the left side of tongue and portion of right side, also excision of sublingual glands for malignant growth of at least one year's standing. Kocher's cautery knife was used. Dr. Rosenthal described the technique of the operation.

Meat and Dairy Inspection was the title of a paper by Dr. E. M. Van Buskirk.

Meat and Dairy Inspection in Fort Wayne was the title of a paper by Dr. H. O. Bruggeman, in which he said that there is a necessity for local inspection because the federal inspection being rigid is apt to cause diseased cattle to be sent to local slaughterhouses where there are no federal inspectors. The tuberculin test is the best means of detecting tuberculosis in cattle. Pasteurization of milk, if done at all, is best done in the home.

Dr. A. P. Buchman gave a report of the crusade on milk dealers and the good results obtained.

Drs. W. D. Calvin, McCaskey, Rosenthal and Wheelock also discussed the papers.

Dr. Weaver made motion that a committee of ten, of which the members of both health boards shall be part, be appointed to ascertain the cause for continuance of injunction and pursue pure meat propaganda and report to the society. Carried.

Dr. G. W. McCaskey made motion that the following be sent to Rep. Hon. Wm. S. Wells:

The Fort Wayne Medical Society requests you to use your best efforts to secure the early passage of the bill which you have in charge authorizing the appointment of a commission to make a study of the methods of treatment of inebriety and report to the next legislature. Carried.

Dr. W. D. Calvin presented resolution to amend by-laws, which was read, and ordered sent to members.

Adjourned. J. C. WALLACE, Sec.

CLAY COUNTY.

The Clay County Medical Society met in regular session February 18. Minutes of previous meeting read and approved.

Common Diseases and Injuries of the Eyes was the title of an address by Dr. G. W. Benee, of Greencastle. He emphasized the need of thorough antisepsis and the constant application of the same principles of pathology that govern in general practice, saying that the family physician can do more for the eye than is generally thought. He warned against the use of lead lotions by the laity and profession. Discussion.

Dr. Pierce, of Cloverland, read a clinical report of thirty-five consecutive cases of diphtheria systematically treated with antitoxin. One case required a total of 58,000 units before the disease was brought under control, but no sequela resulted in this or other cases treated.

The secretary was instructed to write their representatives, state and national, in the name of the society, urging support of sanitary and public health legislation.

Adjourned.

G. W. FINLEY, Sec.

DELAWARE COUNTY

The regular meeting of the Delaware County Medical Society was held February 5, 1909. Minutes of two previous meetings read and approved.

A Fee Bill adopted by the Green County Medical Society was received and referred to the Committee on Fee Bill.

The Psychology of Religious Emotion was the title of a paper by Dr. H. D. Fair, in which he described the varieties of trance and religious seances which he had frequently witnessed, and concluded that the extreme emotional tactics and grotesque phenomena are not witnessed in the truly pious and reliable members of a congregation, but in the fluctuating, back-sliding element that needed a new supply of religion each revival, and which lasted only a few weeks. Dr. Fair also quoted from an editorial in *The Journal of the A. M. A.*, as follows: "The consolations of religion are full of peace and hope to those who can receive them. This effect flows, not from the verity of any particular religious creed, but from the faith and reliance which the believer reposes in it. On the other hand, those not influenced by any religious tendency, can obtain similar results through other means." The paper was generally discussed.

Adjourned.

H. S. BOWLES, Sec.

ELKHART COUNTY.

(Meeting of January 7.)

The Elkhart County Medical Society met in regular session Jan. 7, 1909. Dr. Bauman read a paper on "The Diagnosis of Pneumonia," and Dr. F. N. Dewey read a paper on "The Treatment of Pneumonia." Dr. F. C. Eckelman, at his own request, was granted a withdrawal. The application of Dr. Sider, of Millersburg, was referred to the Board of Censors for further investigation.

Adjourned.

A. A. NORRIS, Sec.

(Meeting of February 4.)

Society met in regular session.

Mastoiditis—Bezold's abscess was the title of a paper by Dr. G. W. Spohn, in which he described the anatomy of the mastoid in brief, giving the bony formation, and mentioning the cause of mastoid inflammation, which he said was usually brought on by catching cold, exposures to extreme temperatures, general and infectious diseases, such as diphtheria, scarlet fever, tuberculosis, typhoid fever, syphilis, whooping cough, measles and influenza. The author discussed the preventive and abortive treatment very fully, and said that elimination was the best means of cutting short a mastoiditis. Reduce the fever with sponging, the malaise with small doses of phenacetin, but do not

lock up the secretions with opiates if it can be avoided. Bier's hyperemic treatment is highly recommended by some physicians. With careful general and local treatment most cases of mastoiditis can be aborted, that is if seen in the primary state; but if the infection be due to the influenza, diphtheria, scarlet fever or syphilis, the treatment is never so effective. As to operation the author said that while many mastoids have been opened unnecessarily, many cases of meningitis, cerebral abscess, cerebellar abscess and sinus phlebitis, which have been diagnosed "brain fever," die, when the infection was due to otitic origin and might have been saved with proper mastoid drainage. This should put every physician upon his guard.

It has been pointed out by Bezold, Politzer and many others that in every case of acute, purulent otitis media, pus can be found in the mastoid cells. Inflammatory processes have been found regularly during measles and scarlet fever in the mastoid cells, even the first few days of the fever. This occurs when there is no discharge from the ears. This has been demonstrated upon the postmortem table and in operations, by Bezold, Topeitz and Gassler. As a rule Nature will clear up many of these inflammations if she has the proper support. The mucocoeostium, or the lining of the cells can be bathed with pus with impunity, but if pus gets between the mucocoeostium and the bone, an abscess will form. There can be no involvement of the mastoid cells until there is an infection of the lining membrane. Hence it is not safe to be too conservative, nor best to be too radical. It would be a good rule, in acute cases of mastoiditis, if the symptoms do not abate in four or five days, to advise an operation. In chronic continued middle ear suppuration, the mastoid is involved and generally the antrum is the seat of the trouble. A mastoiditis may perforate the mastoid process, externally, through the cortical layer, into the auditory canal, or inferiorly, at the incisura mastoidae. It may also break into the cranial cavity or the sigmoid sinus. When the perforation is through the inferior and medial sides of the mastoid process, it is called a Bezold mastoiditis, so named after the man who studied its development. When pus escapes from the perforations it passes beneath the solid mass of the three muscles, the sterno-mastoid, splenius and trachelo-mastoid, gravitating into the deep fascia of the neck, and passing in the line of the least resistance, usually the sheaths of the large blood vessels. In some cases it gravitates to the larynx, and from there to the mediastinum, causing pyothorax or pneumonia. In a Bezold abscess there is a swelling of the whole side of the neck, a tenderness beneath the mastoid, but no outline of a tumor, or fluctuation of an abscess. Gruening and Whiting advocate the complete removal of the mastoid in all cases of mastoid abscess.

Dr. Frank Randolph discussed acute and chronic mastoiditis, and said that the operation for the relief of chronic discharge of the ear is entirely different from a mastoid operation, and is more dangerous to do.

Dr. C. D. Goodrich said that by way of prophylaxis it would be well to teach people how to blow the nose; teach them to blow one side of the nose at a time, and thus avoid the danger of forcing infected matter through the Eustachian tubes to the middle ears. He does not think that every case of purulent otitis media is accompanied by infiltration of the mastoid cells with pus; in fact he has seen many cases where the pus was confined to the middle ear, and no subsequent history of either mastoid or cerebral abscess. He recommended early opening of the antrum in acute mastoiditis.

Dr. E. M. Hoover discussed the lymphatic supply of the neck, and Dr. B. F. Kuhn the cause and treatment of lymphatic enlargement of the neck. He discussed simple and acute lymphoma, and adenitis, and said that in the presence of enlarged tonsils and adenoids, over 15 per cent of these cases showed the presence of T. B. in the tonsils or adenoids. It has been shown by Dowd that most of the cases first affect one of the two glands at the extreme upper end of the deep cervical chain, while in some cases the original lesions have completely healed. It may be good surgery to deal with the enlarged glands as though they were the primary trouble; however, unless this is known to be the case it is useless to remove the nodes, as it would do the patient more harm than good, as the infection continuing would simply reach other glands, which, enlarging, leaves the patient no better off than before. In doing a complete enucleation the matter of incisions was given particular attention, and it was advised to follow the creases of the neck to avoid unsightly scars. Emphasis was placed on Kocher's advice to make the incisions transverse whenever possible.

The Board of Censors reported in favor of the election of Dr. W. Burt Sider, of Millersburg, and he was elected. Dr. J. A. Work, Sr., was elected a member of the Board of Censors.

Adjourned.

A. A. NORRIS, Sec.

GRANT COUNTY.

At the regular meeting of the Grant County Medical Society arrangements were made to assist in entertaining the State Association of Registered Nurses, when they meet at Marion in April.

Placenta Prævia was the title of a paper by Dr. L. H. Eshelman.

General or Septic Diffuse Peritonitis was the title of a paper by Dr. G. G. Eckhart, in which he said that the disease has been changed from nearly an utterly hopeless condition to one which, if diagnosed early and the new form of treatment employed, results in almost entire recovery. The disease is nearly always secondary to some focus of infection lying adjacent to or burrowing its way to the peritoneum. It may be primary in a few cases. The cause can not be determined, even after autopsy. Much of the diagnosis depends on the history of the case and physical examination. Particular stress has been laid on meteorism, spasm, loss of pulse volume, and the characteristic facial expression. Microscopical examination of the exudate should always be made while dealing with these cases, as it determines the source and character of the infection, and often the outlook. Prognosis should be given guardedly, as in rare cases spontaneous rupture occurs, and recovery sometimes follows without operation. The treatment is nearly always surgical. That outlined by Murphy is thought best, because founded on surgical physiology and pathology, and is followed by the lowest mortality. If early diagnosis is made, followed by early operation and employment of the Murphy treatment, mortality can be brought below one per cent.

KOSCIUSKO COUNTY.

The Kosciusko County Medical Society met in regular session February 23. Minutes of previous meeting were read and approved.

The society having had an inquiry as to some of the conditions under which it was considered ethical for physicians' names to appear in the newspapers, reply was made by sending a copy of the "Principles of Medical Ethics," calling attention to the paragraph in which it is considered best for physicians not to publish their cases or operations in the newspapers. The point was brought out, however, that there are occasional exceptions to this and that it did not interfere with any member of this county society inserting in his local paper a professional card, simply stating his name and address. On the other hand, it was pointed out that, according to medical ethics, it becomes the duty of physicians to appear before the public in regard to subjects especially pertaining to their profession, which affects the community as a whole, such as questions of public hygiene, sanitation, legal medicine, prevention of epidemics, etc.

The following committee was appointed to draft resolutions in regard to the death of Dr. J. M. Bash, who was an honored member of the society: Drs. T. J. Shackelford, C. C. DuBois and C. N. Howard.

The Factors Which Influence the Progress of Chronic Valvular Disease—Its Etiology, was the title of a paper by Dr. J. G. Nehrbas, of Winona Lake, in which he said that rheumatism is the chief disease in which acute endocarditis is met and is also the condition which affects the progress of already established endocarditis. It would be safe to treat every case of acute articular rheumatism as one of acute endocarditis as well. Dr. Nehrbas also brought out the important rôle played by the infectious diseases, as well as the baneful effects of excessive exercise and particularly hill climbing.

The Treatment of Acute and Chronic Endocarditis was the title of a paper by Dr. L. W. Ford, of Syracuse. He recommended the use of salicylates in acute rheumatism. In the treatment of acute endocarditis he laid emphasis upon rest in bed, and the value of cold applications as compared with aconite. The treatment of chronic valvular disease of the heart during the stage of compensation resolved itself into the management of the patient's mode of life. In disturbed compensation the best drug is digitalis.

Some of the points brought out in the discussion of these two papers are as follows: Dr. F. H. Foster, Warsaw: In almost all conditions it is well to consider the heart. Dr. A. C. McDonald, Warsaw: Children under ten years of age who have rheumatism are apt to have a bad time with the heart. Occupation is an important factor, because the progress of the disease depends a great deal upon how much hard work the patient has to do. Those patients who have their loss of compensation accompanied by vomiting do badly. Digitalis is one of the greatest drugs in the pharmacopeia. Slowing of the pulse is the guide in giving it. In myocardial disease digitalis may possibly do harm because the heart muscle itself is not strong. Strophanthus is much inferior to digitalis, but it will sometimes do the work where digitalis could not. Dr. M. G. Yocom, of Mentone: The endocardium is practically a non-vascular tissue. It receives its nourishment from the underlying tissues. The cells of the endothelium may become broken down and give an opportunity for germs to enter and cause necrosis. President C. W. Burkett: Functional disease of the heart sometimes follows as a sequel of infectious fevers. Dr. C. C. DuBois, Warsaw: Digitalis sometimes loses its power for good after it has been given to a patient for a little time, although it may have helped in the be-

ginning and may help again later in the course of the disease. Dr. Nehrbaus: I believe that endocarditis is not a complication of rheumatism or scarlet fever, but a symptom of it.

Adjourned.

C. NORMAN HOWARD, Sec.

KNOX COUNTY.

The program for the February meeting of the Knox County Medical Society consisted of a symposium on "Appendicitis," which elicited a general discussion.

Dr. Mary H. Michie was elected to membership. It was arranged for as many as can to attend the meeting of the Second Councilor District Medical Society, to be held in Bloomington, May 12th.

Adjourned.

CHAS. S. BRYAN, Sec.

LAWRENCE COUNTY.

The Lawrence County Medical Society met in regular session at Bedford, January 7. The committee appointed at a previous meeting to revise the fee bill made their final report and distributed the new fee bills which had been printed as read and adopted at the last meeting.

Bronchopneumonia in Children; Its Causes and Treatment, was the title of a paper by Dr. Riley Shrum, in which he said that as yet we have no specific remedy for the treatment of this condition. The treatment is mainly supportive, their being great prostration in most cases. In emergencies, or whenever vomiting in the use of stimulants, they should be given hypodermically. Freshly prepared mustard paste applied over the chest, and the mustard footbath, are considered valuable measures. The emunctories should be kept active, and any other indications met as they arise.

Dr. Emery cited a case in a six months' old child where respiration ran as high as 120 per minute, finger nails dark and lips livid, showing marked cyanosis. In this case, in addition to other recognized remedies, oxygen gas was administered with splendid results, recovery following.

Dr. Perkins said that as a stimulant he preferred aromatic spirits of ammonia. Would employ hydrotherapeutics.

Dr. Hunter employs creosote and liquid guaiacol. Treatment should be begun by a purgative; unload the portal circulation. He does not have any faith in antiphlogistine or any of the other mud poultices in pneumonia. Prefers strychnin as a stimulant.

Dr. Dollens prefers mustard paste to antiphlogistine, and emphasizes the importance of fresh air.

Dr. Duncan spoke of the importance of fresh air and sunshine and considers mustard paste much superior to mud dressings. Keep the emunctories active.

Adjourned.

RILEY SHRUM, Sec.

* * *

The Lawrence County Medical Society met in regular session February 4.

Talipes Equinovarus.—Clinical case report by Dr. Freeland. In this case only the tendo-achillis was divided. The foot was placed in a plaster-of-Paris dressing, and at the end of a week this was substituted by a brace, which was worn for several weeks.

Appendicitis.—Clinical case report by Dr. Short. The especially interesting feature of this case was the absence of any of the definite signs of pus, an abun-

dance of which was found on operation. The temperature was not elevated more than 1 degree at any time, the condition of the tongue and the tenderness over McBurney's point being about the only symptoms of appendicitis. Drainage established and recovery uneventful.

Adjourned.

RILEY SHRUM, Sec.

MADISON COUNTY.

The regular meeting of the Madison County Medical Society was held February 23.

Some Anatomical Relations was the title of a paper by Dr. George A. Whittlesey. The author presented six specimens which he had prepared, showing the location and relations of the indefinite term "nasal catarrh." Discussion by Dr. Norris.

Placenta Prævia was the title of a paper by Dr. Horace E. Jones, in which he discussed the mistakes and failures which may arise in the treatment of this dread condition confronting the medical men of to-day. Discussion.

Adjourned.

BEN H. COOK, Sec.

PORTER COUNTY

The Porter County Medical Society met in regular session January 5 at Valparaiso. A committee appointed for the purpose secured the small court room of the court house for the meeting place for 1909 free of charge.

A communication from Dr. Hurty on the subject of "A Tuberculosis Hospital," was received and placed on file.

La Grippe was the title of the paper of the day, by Dr. Dobbins, of Wheeler, which elicited extended discussion.

Adjourned.

G. R. DOUGLAS, Sec.

* * *

The Porter County Medical Society met in regular session February 2. Following the transaction of the business of the society a short clinic was held, one of the members presenting a case of sarcoma of the kidney in a boy six years of age, caused by being knocked down and run over by a bicycle six months before. All present agreed on diagnosis.

Pernicious Anemia was the title of a paper read by Dr. Stoner, of Valparaiso. The author presented a blood slide showing nucleated red corpuscles. Discussion general.

Adjourned.

G. R. DOUGLAS, Sec.

POSEY COUNTY.

The Posey County Medical Society met in regular session February 2. Meeting called to order by President Holton.

Cholecystitis was the title of a paper by Dr. J. C. McClurkin, of Evansville. The paper was comprehensive, scientific and practical, especial attention being given to the diagnosis, treatment and the comparative uselessness of internal medication. Little or no hope of a cure can be entertained except through surgical intervention. Considering the seriousness of the attack, the sureness to recur, the danger to life and the numerous sequelæ, operation should be regarded not only as justifiable but failure to operate as unwise and inexcusable.

In the discussion objection was raised to the operation because of the mortality, which, however, was shown to be very low. The various internal remedies were considered and thought by nearly all members present to be insufficient.

Chronic Constipation was the subject of a paper read by Dr. J. E. Gudgel, of Cynthiana. Different methods of treatment based on the causes of the condition, and the individual peculiarities of the case were detailed. Dr. Gudgel urges careful searching for causes, an investigation into the exact condition of the patient with respect to alimentary abnormalities, revision of diet, exercise, massage and habit, and emphasized caution in the selection and use of drugs.

Dr. Charles Auburn, of Wadesville, read abstracts from a magazine editorial entitled "The Three Learned Professions." The author took the view that law, theology and medicine contained more rubbish than wisdom and considered the advisability of combining the professions and providing a course of education to cover all, making the graduate master of the three professions and compelling the elimination of the injustice from law, dogma and hypocrisy from religion and quackery and humbuggery from medicine.

The discussion showed that all were agreed that such a course was narrow, impractical, but in some measure utopian. The close relation of religion to medicine was shown by the Emmanuel movement.

Dr. G. C. Smith, of Poseyville, read an address by Prof. James, entitled "The Powers of Men."

Multiple Neuritis. Case report by Dr. F. L. Stallings, of New Harmony. This interesting case had its inception in pernicious vomiting of pregnancy. Abortion occurred, followed by numerous convulsions and multiple neuritis. Patient recovered, the lower limbs remaining paralyzed, but the health otherwise being unimpaired. Discussion.

Adjournd.

C. L. RAWLINGS, Sec.

VIGO COUNTY.

(Meeting of February 2.)

Dr. Boor lectured on dislocations of the hip. Dr. B. V. Caffee presented a case of hip-joint disease in a girl aged four years. The differential diagnosis of tuberculosis of the hip, poliomyelitis and coxa vera was gone into very thoroughly. Since the history of this case was not typical of either of these diseases, the case was left undiagnosed, to be reported upon later.

Adjournd.

CHAS. N. COMBS, Sec.

(Meeting of February 9.)

Dr. Mattox had a case of congenital atresia of the vagina in a baby. Dr. Fink reported a case with photograph of epispadias with partial exstrophy of the bladder and absence of the umbilicus. Dr. Schell presented a case of ectocardia in a man with advanced pulmonary tuberculosis. The negative result from the tuberculin vaccination test was noticed. Dr. W. R. Mattox lectured on "Diseases of the Penis," and Dr. Jett on "Diseases of the Urethra." Mr. John Owens spoke on medical bills now before the legislature.

Adjournd.

CHAS. N. COMBS, Sec.

(Meeting of February 17.)

A memorial meeting to pay tribute to the memory of Dr. L. J. Weinstein. Eloquent testimony was offered as to his value as a friend, as a professional

consultant, as a surgeon of rare skill, and as a public benefactor.

Adjourned.

CHAS. N. COMBS, Sec.

(Meeting of February 23.)

A typical ease of Raymond's symmetrical gangrene in a young lady was shown by Dr. B. V. Caffee.

Adjourned.

CHAS. N. COMBS, Sec.

(Meeting of February 26.)

Good fellowship banquet given the society by the Retail Druggists' Association. Attendance ninety. The menu was in the form of a prescription, using the Latin botanical and zoological names for the different comestibles. Sig. Take liberal doses and follow with Pluto water in the morning. The following doctors responded to toasts: Drs. Boam, Boor, Stunkard; "Friendly Relations," M. R. Combs; U. S. P. and N. F. Products vs. Advertised Proprietaries," C. N. Combs.

Adjourned.

CHAS. N. COMBS, Sec.

WHITE COUNTY.

The White County Medical Society met in Reynolds, Feb. 2, 1909.

Drs. R. K. Schofield and Donald P. McCrea, both of Reynolds, were elected members of the society.

Observations on Appendicitis was the title of a paper by Dr. R. M. Reagan. Discussion.

The next meeting of the society will be held in Monon in April.

Adjourned.

GRANT GOODWIN, Sec.

BOOK REVIEWS

THE BABY; ITS CARE AND DEVELOPMENT. By Le Grand Kerr, M.D., Professor of Children's Diseases in the Brooklyn Post-Graduate Medical School, etc. Illustrated. Cloth, 150 pp. Price, \$1.00 net. A. T. Huntington, Brooklyn and New York, 1908.

Dedicated to one, and designed especially for the mother, this little work should find a warm welcome in the homes of all where proper care of infants is desired. Enough is given to teach the mother common sense and not to attempt that which is beyond her, but call her physician immediately she has exhausted her legitimate means.

THE PRINCIPLES OF PATHOLOGY. Volume I, General Pathology. By J. George Adam, M.A., M.D., LL.D., F.R.S., Professor of Pathology in McGill University, Montreal. Octavo, 948 pages, with 322 engravings and 16 plates. Cloth, \$6.00 net. Lea & Febiger, Publishers, Philadelphia and New York, 1908.

It is doubtful if there has, within the past decade, appeared in the English language a work of equal standing and importance, not only in its own particular field but in its bearing upon the fundamental principles of all medical science. Other works in English upon pathology there are of course, and good ones, but most, if not all, are largely collaborations and for the most part based upon the work of the German and other foreign investigators. In this masterpiece one finds the author ever ready to accord full credit to all reliable contributors to the science of pathology, but always reserving the right to dissent from the heretofore commonly accepted dicta, provided he has, on weighing in his own balance, found them wanting. In

truth the volume abounds in references to the works of other earnest pathologists and the ever-conspicuous effort is to encourage the student to make his own logical deductions from the evidence at hand, benefit being offered as well of the rich experience and careful reasoning of the author.

The illustrations, arrangement, type, paper, index and binding are all admirable; hence it seems all the more unfortunate that so many typographical errors and other evidences of loose proof-reading should have found a place in such a work. We trust that with future editions and with the issuance of the second volume, this one and only disagreeable feature will be eliminated.

The arrangement of the work is both natural and logical, beginning as it does with certain prolegomena, made up chiefly of a consideration of the unit cell, its part in embryology, histology, physiology, physiologic chemistry, growth and development, fertilization, and the general phases and theories of inheritance. Section two deals with the causes of disease, as made up of inherited and early-acquired morbid conditions, monstrosities and abnormalities, later acquirement of diseases, exogenous and endogenous intoxications,

bodily states as predisposing causes, predisposition and susceptibility. Under section three, part one, are considered the morbid and reactive processes such as inflammation, infection, immunization and immunity, syncope, shock and collapse. The rational stand is taken that inflammation, instead of being a thing to be combatted and feared, stands as Nature's weapon of defense against insult. The chapters on immunity are very complete and worthy of a place in a text on bacteriology alone. Part two has to do with the tissue changes as manifested in hypertrophy, regeneration, transplantation, metaplasia, neoplasms, typical and atypical hydric tumors, lepidic tumors, theories of neoplasia, cysts, regressive tissue changes, pigmentations, necrosis, death, etc. The embryologic origin of the various tissues forms the rational basis for the author's classification of tumors and the degree of malignancy of a tumor is measured by the loss of functional and simultaneous increase of vegetative activity.

The work closes with four appendices on protein nomenclature, intercellular substance as living matter, nucleolar matter in relation to cell activity, and the accessory chromosome.

MEMBERS OF THE INDIANA STATE MEDICAL ASSOCIATION.

This list contains only the names of physicians who are members in good standing of the Indiana State Medical Association. The list contains the names of all of those whose dues were received by Secretary Heath up to and including March 10. Many members of the county societies have failed to pay their dues for 1909, and, according to the by-laws of the Constitution, are not members in good standing of the State Association and consequently not entitled to **THE JOURNAL**. In some instances county society members who have paid dues to county secretaries are deprived of membership in the Association and **THE JOURNAL** as result of failure on the part of county secretaries to make remittances to Secretary Heath. No physician can consider himself a member of the Association until after he has received his official receipt from Secretary Heath, and the appended list contains only the names of those to whom he has issued membership cards. If there are any errors in name or address **THE JOURNAL** should receive notice. Give the number of the membership card when requesting changes or additions.

ADAMS COUNTY

Dr. R. S. Wilson,
Wren, Ohio

DECATUR

Dr. S. D. Beavers
Dr. J. S. Boyers
Dr. C. S. Clark
Dr. D. D. Clark
Dr. H. F. Costello
Dr. H. E. Keller
Dr. W. P. McMillen
Dr. J. M. Miller
Dr. W. E. Smith
Dr. P. B. Thomas

GENEVA

Dr. H. M. Aspey
Dr. L. L. Mattox
Dr. C. R. Price

MONROE

Dr. M. F. Parrish
Dr. C. C. Rayl

ALLEN COUNTY

Dr. G. B. M. Bower,
Vernal, Utah
Dr. L. L. Culp, Ft.
Toten, N. Dak.

Dr. N. L. Deming,
Litchfield, Conn.
Dr. J. D. Morgan,
Dixon, Ohio
Dr. Alice B. Williams,
Columbia City

FORT WAYNE

Dr. Charles E. Barnett
Dr. W. W. Barnett
Dr. Chas. G. Beall
Dr. E. E. Bell
Dr. L. E. Brown
Dr. H. O. Bruggeman
Dr. A. P. Buchman
Dr. A. E. Bulson, Jr.
Dr. J. Carrithers Calvin
Dr. W. D. Calvin
Dr. W. W. Carey
Dr. E. A. Crull
Dr. Chas. R. Dancer
Dr. Edw. F. DeVaux
Dr. Jas. M. Dinnen
Dr. L. P. Drayer
Dr. H. A. Duemling
Dr. C. H. English
Dr. Wm. Enslen
Dr. A. E. Fauve
Dr. J. K. Geary
Dr. J. H. Gilpin

Dr. H. E. Glock
Dr. Bertha Goba
Dr. C. W. Gordon
Dr. G. L. Greenawalt
Dr. W. O. Gross
Dr. Allen Hamilton
Dr. S. H. Hawice
Dr. Samuel Henderson
Dr. J. Hetrick
Dr. Wm. A. Hulbush
Dr. Chester E. Hull
Dr. C. F. Kaadt
Dr. Alfred Kane
Dr. A. J. Kesler
Dr. C. C. Kimmell
Dr. H. S. Macbeth
Dr. J. E. McArdle
Dr. G. W. McCaskey
Dr. Jas. B. McEvoy
Dr. J. E. McHugh
Dr. R. B. McKeeman
Dr. E. J. McOscar
Dr. E. E. Morgan
Dr. Harold K. Mouser
Dr. H. G. Niermann
(deceased)
Dr. C. C. F. Nieschang
Dr. A. F. Phillips

Dr. M. F. Porter
Dr. J. M. Pulliam
Dr. J. H. Ranke
Dr. B. W. Rhamy
Dr. M. I. Rosenthal
Dr. Geo. A. Ross
Dr. M. F. Schick
Dr. John Schilling
Dr. Carl Schilling
Dr. A. L. Schneider
Dr. W. F. Schrader
Dr. S. D. Sledd
Dr. Guy A. Smith
Dr. J. W. Squires
Dr. Geo. B. Stemen
Dr. Geo. J. Studer
Dr. J. E. Stultz
Dr. H. V. Sweringen
Dr. B. Van Sweringen
Dr. G. Van Sweringen
Dr. Philip Titus
Dr. E. M. Van Buskirk
Dr. J. C. Wallace
Dr. B. P. Weaver
Dr. K. K. Wheelock
Dr. Wm. P. Wherry
Dr. Mary A. Wherry
Dr. R. P. White

HARLAN Dr. Horace E. Adams
 NEW HAVEN Dr. G. G. Brudi
 Dr. L. S. Null
 MONROEVILLE Dr. W. A. Connelly
 Dr. D. E. Kauffman
 Dr. S. E. Mentzer
 WHITTING Dr. B. U. Doolittle
 EDGERTON Dr. K. C. Evans
 HUNTERTOWN Dr. Frank Greenwell
 Dr. H. Steinman
 Dr. L. T. Rawls
 POE Dr. J. D. Mercer
 MAPLES Dr. I. N. Myers
 HARLAN Dr. W. H. Thompson
 SIELDON Dr. D. C. Wybourn
BARTHolemew County
 Dr. R. M. Tilton,
 Nashville
 AZAILA Dr. O. A. DeLong
 COLUMBUS Dr. A. J. Banker
 Dr. J. W. Benham
 Dr. W. H. Butler
 Dr. Bertha A. Clouse
 Dr. B. Fitzpatrick
 Dr. E. T. Francis
 Dr. J. K. Hawes
 Dr. R. E. Holder
 Dr. H. H. Kamman
 Dr. A. M. Kirkpatrick
 Dr. Edward L. McCoy
 Dr. Geo. T. McCoy
 Dr. D. J. Marshall
 Dr. O. H. Mennett
 Dr. J. L. Morris
 Dr. F. D. Norton
 Dr. G. E. Reynolds
 Dr. A. P. Roope
 Dr. Lottie R. A. Suver-
 krup
 Dr. S. M. Voris
 Dr. W. E. Wisner
 Dr. E. U. Wood
 HARTSVILLE Dr. F. J. Beck
 ELIZABETHTOWN Dr. G. O. Cosby
 HOPE Dr. B. F. Dudding
 Dr. L. D. Reed
 Dr. E. G. Regennas
 WAYMANSVILLE Dr. J. I. Maris
 TAYLORSVILLE Dr. C. W. Roller
BENTON COUNTY
 FOWLER Dr. Clark Cook
 Dr. Arthur Le Sage
 Dr. Everett Mavity

BOSWELL Dr. R. C. Cook
 Dr. O. M. Flack
RAUB Dr. F. C. Hammond
EARL PARK Dr. John W. McMahan
AMBIA Dr. W. H. Taylor
BLACKFORD COUNTY
HARTFORD CITY Dr. M. M. Clapper
 Dr. C. W. Corey
 Dr. H. C. Davisson
 Dr. Samuel Hollis
 Dr. Ella A. Hollis
 Dr. W. A. Hollis
 Dr. John H. Lorimore
MONTPELIER Dr. Charles A. Sellers
 Dr. C. Q. Shull
 Dr. J. A. Taylor
 Dr. W. E. Thornton
ROLL Dr. J. R. Harrold
 Dr. J. C. Kirkpatrick
TRENTON Dr. L. C. Landon
BOON COUNTY
JAMESTOWN Dr. T. A. Bounell
 Dr. T. B. Johnson
LEBANON Dr. J. R. Ball
 Dr. H. A. Beck
 Dr. James H. Black
 Dr. A. P. Fitch
 Dr. A. B. Jones
 Dr. J. S. Reagan
 Dr. Guy A. Schultz
 Dr. W. H. Schultz
 Dr. C. H. Smith
 Dr. DeL Smith
 Dr. Mary M. Van Nuys
 Dr. W. H. Williams
ZIONSVILLE Dr. J. F. Brendell
 Dr. Elmer D. Johns
THORNTOWN Dr. C. Bassett
 Dr. G. K. Hurt
 Dr. J. S. Shields
REESE MILLS Dr. C. A. Endicott
 Dr. C. D. Umberhine
WHITESTOWN Dr. B. B. Little
CARROLL COUNTY
DEER CREEK Dr. J. E. Kitchell
 Dr. D. A. McCleary
CAMDEN Dr. Hugh Martin Hall
 Dr. C. M. Kennedy
 Dr. E. N. Kennedy
 Dr. Charles E. Scholl
 Dr. B. F. Snyder
FLORA Dr. M. D. Callane
 Dr. B. W. Egan
 Dr. F. P. Lyons
 Dr. Ed L. Peter
DELPHI Dr. C. E. Carney
 Dr. I. N. Cochran
 Dr. P. W. Conway
 Dr. C. C. Crampton
 Dr. Wm. R. Quick
 Dr. F. H. Robinson
 Dr. W. F. Sharer
 Dr. J. J. Shultz
 Dr. Ione Shultz
PYRMOUNT Dr. J. E. Carney
BURLINGTON Dr. A. J. Chittick
ROCKFIELD Dr. W. H. Galbreth
 Dr. H. Y. Mullin
RADNOR Dr. W. O. Gossett
YEOMAN Dr. C. C. Heckman
CUTLER Dr. W. A. Trobaugh
BURROWS Dr. E. D. Wagoner
CASS COUNTY
 Dr. A. C. Batholomew,
 South Bend
LOGANSPORT Dr. J. H. Barnfield
 Dr. John Bradfield
 Dr. F. A. Busjahn
 Dr. N. W. Cady
 Dr. J. L. Gilbert
 Dr. Joseph Hall
 Dr. Joseph Hallanan
 Dr. C. F. Haugh
 Dr. M. C. Hawley
 Dr. F. J. Herrmann
 Dr. Robert Hessler
 Dr. J. P. Hetherington
 Dr. H. B. Hill
 Dr. W. A. Holloway
 Dr. H. C. Johnson
 Dr. J. A. Little
 Dr. C. H. McCully
 Dr. G. D. Miller
 Dr. John Nicodemus
 Dr. A. L. Palmer
 Dr. J. Z. Powell
 Dr. J. H. Reed
 Dr. Clark Rogers
 Dr. Joseph Rubsam
 Dr. J. B. Schultz
 Dr. J. J. Stanton
 Dr. Fred Terflinger
 Dr. C. L. Thomas
 Dr. R. E. Troutman
 Dr. A. W. Tucker
 Dr. Mary Widdop
WALTON Dr. C. C. Campbell
 Dr. C. D. Carpenter
GALVESTON Dr. J. Frank Cornell
 Dr. Z. U. Loop
 Dr. H. H. Miller
NEW WAVERLY Dr. A. E. Graves
 Dr. L. L. Quick
YOUNG AMERICA Dr. A. J. Gray
 Dr. Wm. E. Lybrook

LONG CLIFF Dr. G. E. Huffman
ROYAL CENTER Dr. Frank M. Kistler
 Dr. Marcellus Mayfield
TWELVE MILE Dr. Lewis C. Miller
CLARK COUNTY
 Dr. Wm. A. Hobday,
 Goldfield, Nev.
CHARLESTOWN Dr. C. W. Bottorf
 Dr. David Coombs
 Dr. W. F. Work
JEFFERSONVILLE Dr. David Cohen
 Dr. Wayne H. Crum
 Dr. E. N. Flynn
 Dr. Austin Funk
 Dr. O. P. Graham
 Dr. C. F. C. Hancock
 Dr. D. C. Peyton
 Dr. I. N. Ruddell
 Dr. E. L. Swadener
 Dr. W. H. Sheets
 Dr. H. H. Smith
MARYSVILLE Dr. Wm. Smith
HENRYVILLE Dr. S. B. Elrod
 Dr. Ezra Prall
 Dr. James H. Walker
BORDEN Dr. W. A. Hall
OTISCO Dr. Chas. P. Meloy
NEW WASHINGTON Dr. S. L. Adair
SELLERSBURG Dr. J. M. Howes
 Dr. I. M. McBride
 Dr. J. M. Meloy
UTICA Dr. Francis W. Johnson
MEMPHIS Dr. J. M. Reynolds
CLAY COUNTY
BRAZIL Dr. Fred C. Dilley
 Dr. George W. Finley
 Dr. Robt. W. Hawkins
 Dr. S. G. Hollings-
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 Dr. Junius L. Lambert
 Dr. Henry L. Muncie
 Dr. Frederick Nussel
 Dr. Wm. H. Orr
 Dr. James A. Rawley
 Dr. Jacob F. Smith
 Dr. C. C. Sourwine
 Dr. John D. Sourwine
 Dr. Lewis L. Williams
BOWLING GREEN Dr. T. Roy Cook
CENTER POINT Dr. Gilbert R. Finch
CORY Dr. Oliver James
 Dr. C. A. Ray
ASHBORO Dr. J. K. Moss

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Dr. William Palm	Dr. J. W. Anderson	Dr. J. A. Welch	Dr. J. W. Arnold
CARBON	Dr. Jerome Demotte	ST. PAUL	OAKVILLE
Dr. George M. Pell	Dr. T. B. Rankin	Dr. Chas. L. Williams	Dr. P. C. Barnard
CLOVERLAND	ELNORA	SARDINIA	NEW BURLINGTON
Dr. Harold J. Pierce	Dr. Rufus J. Danner	Dr. Chas. Wood	Dr. J. N. Bell
KNIGHTSVILLE	Dr. Mac G. Porter	DEKALB COUNTY	DALEVILLE
Dr. Felix G. Thornton	PLAINVILLE	AUBURN	Dr. W. S. Brandon
CLAY CITY	• Dr. Ora K. McKittrick	Dr. J. B. Casebeer	COWAN
Dr. H. R. Vandiver	Dr. W. O. McKittrick	Dr. F. M. Hines	Dr. T. C. Henry
STAUNTON	MONTGOMERY	Dr. F. G. Matheny	SELMA
Dr. Patrick H. Veach	Dr. O. E. Lett	Dr. J. D. Nusbaum	Dr. Chas. A. Jump
HARMONY	DEARBORN COUNTY	Dr. W. H. Nusbaum	Dr. S. G. Jump
Dr. Melvin H. Young	Dr. C. Newforth, Sun-	Dr. Charles S. Stewart	ROYERTON
CLINTON COUNTY	man.	Dr. Vesta M. Swarts	Dr. T. J. Mansfield
FRANKFORT	AURORA	Dr. W. W. Swarts	ALBANY
Dr. F. M. Bolden	Dr. Mars L. Bond	Dr. U. G. Souder	Dr. Ulysses G. Powers
Dr. G. W. Brown	Dr. O. P. M. Ford	WATERLOO	Dr. J. M. Vanderburg
Dr. A. G. Chittick	Dr. W. H. Haynes	Dr. Frank Bevier	YORKTOWN
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ORIGINAL ARTICLES

SOME FEATURES OF INTRASIGMOID DISEASE.*

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The object of this paper is to consider sigmoid disease in some of its phases and the necessity for its early diagnosis.

Further than a passing mention of the pathology of this segment, due to extra-intestinal causes, it will receive no further consideration in this paper.

The extra-intestinal causes of the disturbances of the physiology of the sigmoid principally lie in its normal anatomy and the varying positions it takes from complete collapse to complete distention. Attached at its proximal and distal portions by a comparatively short mesentery, its motion at these locations is more or less limited. The middle portion, however, with its long mesentery, which has a narrow base, becomes the most movable organ in the abdominal cavity. Its transverse portion reaches the right iliac fossa, joining the rectum from the right as often as it does from the left. The studies of Treves, Testut, Schifferdecker and others have perhaps established that in more than 50 per cent. this is the anatomic disposition, and to this fact are due the discrepancies in its descriptive anatomy. Considering the rectosigmoidal junction opposite the third sacral vertebra in twenty examinations made by Dr. Knox, deputy coroner, and myself for this report, the sigmoid with its mesosigmoid joined the rectum in ten subjects from the right, five from the left and in five the mesosigmoid was attached in the median line. In the male the

appendix being a pelvic organ in about 38 per cent., the cecum in about 10 per cent., the sigmoid in about 65 per cent., and in the female the appendix in about 47 per cent., the cecum in about 20 per cent., the sigmoid in about 75 per cent. this anatomy provides for an intimate relationship with these organs, most markedly interesting to both the internist and surgeon.

The sigmoid loops, lying normally, distal and dorsal to the fimbriated extremities of the oviduct, through which it is estimated about 80 per cent. of peritoneal exudates in the adult female is introduced into the pelvis, the intimate relationship of these organs thus afforded is no less interesting than that just mentioned. In a series of dissections made by Byron Robinson to illustrate the relation of the sigmoid to other organs by inflating to various degrees with air, in which position they were allowed to dry, he has perhaps demonstrated that the relation of the urinary bladder, and especially the ureter, to the sigmoid (and rectum) are much more intimate than is commonly regarded. In the female this close relationship is not so marked, the pelvis being larger and the vagina intervening. In the male the distal end of the ureter, being embedded in the connective tissue, which together with the vesiculae seminales is in close proximity to the rectum, gives explanation for pain when these organs are inflamed by the penetrating gonococcus, or otherwise, and the escape of semen resulting from pressure in the passage onward of large masses of hardened feces coming down from the sigmoid. Therefore, because of this anatomy, the sigmoid takes bizarre positions at times, coming in contact with every other segment of the intestinal canal and most other abdominal organs, the nature of the resulting inter-relationship depending upon various factors, the principal of which are its own pathology, that of the organs to which it approaches, and length of time

*Read before the Indiana State Medical Association, at French Lick, June 18, 1898.

of contact. Robinson says: "I know of no abdominal organ, except the pancreas, to which I have not seen it adherent." On passing from this cursory mention of its topography and relation to abdominal organs, we recognize that the sigmoid has the greatest variation in form, position and size of any other abdominal organ, offering many diagnostic difficulties, and that relations are possible which may result in abundant pathology of this segment in connection with other abdominal and pelvic organs and which has in the aggregate of experience been encountered.

In the last edition of Hemmeter, vol. i, page 453, division 9, under the heading, "Inflammation of the Lowest Portion of the Intestines," is, "Mayor ('Quelque note sur une variété d'enterite iliaque,' 'Revue medicale de Suisse romande,' 1893) has described an inflammatory catarrh, affecting exclusively the sigmoid colon, under the name 'sigmoiditis.' The clinical and anatomical picture of this disease is said to correspond closely with that of typhlitis." No further observation regarding sigmoiditis is recorded at this time by Hemmeter. On page 508 of the same edition, under the heading, "Chronic Sigmoiditis," is this short paragraph:

"There is a chronic localized inflammation of the sigmoid flexure in which the pain is permanently confined to the region of this part of the colon. There may be diarrhea or constipation. If the stools are liquid or semisolid, there is a strong admixture of mucus. If there is diarrhea, the evacuations are enveloped in mucus. The following is a clinical report of one of the cases that occurred in my practice." The clinical history and treatment are then recorded, occupying about one and one-eighth pages. On page 504, under the heading, "Sigmoiditis and Pericolitis," is commenced a short consideration, extending to three and three-fourths pages, in which are recorded the four cases described by Mayor. The consideration by the author does not occupy more than the space of one page in which, under the heading, "Diagnosis," he says: "The disease has not been described with sufficient frequency or accuracy to permit of the formation of diagnostic factors." Under the headings, "Acute Sigmoiditis" and "Chronic Sigmoiditis," by Boas, one-half page would be sufficient space for the translation of the author. He reports two cases from his journal. He says: "By chronic sigmoiditis I mean an affection in which there are a constant pain and sensitiveness to pressure in the region of the sigmoid flexure." I would regard it the exception for pain to be constant in this affection in the region of the sigmoid, by which is meant the left iliac region. In fact, the pain is

very intermittent, many cases having pain only upon pressure. A married woman, aged 26, now under observation, has had pain for a period of ten days, confined to the left iliac fossa, which is rather constant, but this arises from an acute exacerbation of a chronic sigmoiditis. I mention this to indicate that this disease has not shaped itself definitely into the literature. At the same time it has received more recognition than other pathologic sigmoid conditions which rank it in importance. Intussusception, invagination and prolapse of the sigmoid receive attention in Gant's third edition, but I have no article of his enabling me to give his views regarding other sigmoid disease. Tuttle has a consideration of it in conjunction with proctitis, and a lengthy article by Heinrich Stern in the February 29 number of the *Medical Record*, to which my attention was directed by Dr. Cook, can be referred to by those interested. Dr. Mathews devotes forty-one pages to "Diseases of the Sigmoid Flexure" in Appleton's *New Medical Series*.

Byron Robinson is doing much effective work to obtain recognition by the profession of the extent and importance of sigmoid disease, and Dr. Tuttle, in a recent letter, says he will soon publish a consideration of "Inflammation of the Sigmoid."

Tuttle has also published a consideration of "Acute Flexures or Angulations of the Sigmoid," with a report of cases, in the March 14 number of the *New York Medical Journal*, 1908.

Except sigmoidopexy and like operations, a reference to the *Index Medicus* shows a scarcity of literature relating to the sigmoid. This is very apparent as to erosion of the mucosa, ulceration, stricture from ulceration, angulations, papillomata, catarrhal conditions, stercoral sigmoiditis and other manifestations of intrasigmoid disease.

In the evolution of disease we have recorded progress, principally, by reasoning from far advanced and easily recognized lesions to the antecedent and earliest departures from the normal. From carcinoma to chronic ulcer or its cicatrix; from stone in the gall passages to previous infection there: from malignant neoplasms of the rectum to previous localized, inflammatory or necrotic, benign lesions; from pelvic abscesses to oviductitis; from hypertrophied infected and infecting tonsils to departure from the embryologic structure; from permanent intestinal angulation to open or cicatrized ulcer; from infectious meningitis or sinus thrombosis to local foci in the mastoid antrum; from terminal to antecedent or original pathology. We have almost come to believe that chronic ulcer, or its cicatrix, is essential

to the growth of carcinoma. Heredity, except as to type of tissue, no longer satisfies our inquiries as to the etiology of disease, and perhaps, especially of carcinoma. Recent studies in gastric pathology demonstrate that gastric carcinoma is a sequel to gastric ulcer, or its cicatrix, in only a small per cent., and the frequency of gastric carcinoma points unerringly to the greater relative frequency of gastric ulcer. That a per cent., approaching 90 of carcinomas in the gastrointestinal tract, occurs at the constricted portions, is not a matter of chance, and, as to frequency of this disease in the intestinalis, experience has placed the sigmoid third. At the junction of the distal descending colon and the proximal, or perpendicular, portion of the sigmoid, where motion is somewhat limited by a comparatively shortened mesosigmoid, there is abundant opportunity for angulation from a sagging descending colon with resultant ulcer, or its cicatrix, as a sequel. At the rectosigmoidal junction perhaps equally favorable conditions exist for the production of the same pathology. The benefit derived from statistics depends upon their just consideration, and when so regarded may supply helpful indications. Of one group of nearly 46,000 cancers occurring in all parts of the body, 6.2 per cent. were in the sigmoid (and rectum). Of another small group of 39 in the sigmoid (and rectum) in the experience of one man, nearly 83 per cent. involved the rectosigmoidal junction. The percentage of numerous other collections differing narrowly from those just mentioned this will perhaps be satisfactorily representative. As a consequence of the rapid absorption of the watery constituents of the feces in the ascending and transverse segments of the colon, the fecal rate of propagation is diminished from the splenic flexure distalward, regardless of gravity in its favor. Constricted at portions, irregularly tortuous and twisting in its course, its major portion transverse, the sigmoid indefinitely arrests the fecal progress and thus becomes the depository for feces. Their prolonged retention here and further depletion of water by absorption, coupled with imperfect evacuation at times of defecation, results in accumulation of varying quantity and density, the pressure from which produces erosions of the mucosa, catarrhal conditions and ulcer. Pathogenic bacteria increase numerically from the duodenum through the intestinalis until, at the sigmoid, they occur in prodigious numbers. The tubercle bacillus and the staphylococcus are present with more or less constancy, and the *Bacillus coli communis* is generally present. The etiologic rôle of the pathogenic bacteria in disease of the lower intestinal tract has not been well de-

fined, and reflecting on the great numbers and numerous varieties that occur here, there is much surprise that there is not disease in excess of what is recognized. Their etiologic influence in disease of the sigmoid mucosa is still a matter undecided. However, the present development of bacteriology will not permit us to ignore that they may be the original cause of some lesion of the sigmoid mucosa, or that bacterial infection may result in the sigmoid itself or adjacent organs through erosions of the mucous membrane from other causes. In this connection there are three anatomic reasons why infection in the sigmoid is more or less limited that I regard worthy of mention: First, in consequence of a very rich and powerful blood supply, though there be mesosigmoiditis, unless it be extensive and dense, the physiologic function of the sigmoid is not seriously deranged. Second, in striking contrast to the appendix, gall ducts and oviductal tubes, where drainage is limited or impossible, the anatomy of the sigmoid provides free drainage from the mucosa, where infection usually occurs, and pus collections, unless there be a perforating ulcer, are rare. Third, from the literature. The enteron transmits infection with facility, but at the sigmoid, as though to protect from the concentration of infection here, the lymphatics, by ages of contact, have become diminished, or obliterated, and lymphatic distribution of infection is here proportionately diminished.

Upon encountering obscure abdominal pain, the attention of the profession was formerly, and perhaps is at the present, so constantly directed to the right iliac fossa that Mayor deserves great credit for describing sigmoiditis as an entity. This he did in 1893, detailing as symptoms those closely resembling typhlitis, and giving as the etiology the prolonged "retention of feces in the sigmoid, and other irregularities of defecation."

The literature would tend to the impression of rarity regarding intrasigmoid disease, but this arises through lack of differentiation. It may be readily associated with the ovary. From Dr. Beach, Pittsburg: "In woman the ovary has been the onus of pelvic distress, which was directly due to some degree of inflammation of the sigmoid." The non-recognition that there may be primary disease in any organ would, of course, lead into error, but the intimate relation of the ovary and sigmoid gives strong support to his observations that there is frequent secondary ovarian from primary sigmoid disease.

Personal Observation: Miss L. Had been attempting to get relief from "ovarian neuralgia" on left side. Right ovary normally sensitive, left hypersensitive. No displacement of ovaries or

uterus. Distal sigmoid hypersensitive, excessive mucus, hypersecretion, very superficial erosions of mucosa and no tendency to bleed. Local treatment of sigmoid gave complete relief without recurrence, now about seven months.

Cecum and Appendix: There is a report of a case now and then in which the cecum and appendix are displaced and are near the left iliac fossa, while it must be not unusual that the sigmoid is in close relation to these organs on the right side. In either case many difficulties in diagnosis arise. But this is beyond the intention of this consideration and is mentioned only to indicate the necessity of differentiation. Personally, I am convinced that much left iliac and obscure abdominal pain so commonly regarded as symptomatic of appendicitis is due to sigmoiditis.

Observations Regarding Urinary Tract.—Vesical irritation is fairly common, and personal observation may be illustrated in the following case:

Mr. M. had been annoyed with periodic attacks of frequent and painful urination for about one year. A general discomfort in the vesical region gave him more distress than the irregularities of micturition. Gastrophtosis, enteroptosis. Had received treatment with the sounds, but was not benefited. Rose bandage gave some relief from vesical symptoms and a firmer abdominal support no more. Sigmoidoscopy gave evidence of an irritable sigmoid mucosa. After the end of the instrument turned the promontory the pain was of the nature he had been having and was referred to the bladder. He had periodical attacks of diarrhea, which were determined to be coincident with attacks of dysuria. He is not free from attacks, but they now give him little discomfort and as to frequency about 1 to 10 of the former condition. He has had two light manifestations in the last six months. He is an attorney and his professional engagements require him to be away from the city much of the time. It is after several months from treatment and indiscretions in living that there is now recurrence. He has had but little treatment and neglects attention to the trouble when he is feeling well. Cleansing the sigmoid and local treatment with 1 per cent. nitrate of silver gave prompt relief from diarrheal attacks and vesical symptoms.

Personal observation while using the pneumatic sigmoidoscope showed want of normal distensibility in two cases. This arises from infiltration of the sigmoid parietes (benign infiltrative sigmoiditis). When this condition becomes advanced, narrowing the lumen of the bowel, it may give prompt and abiding impressions of car-

cinoma. Two cases operated by Mr. Monserratt at the Northern Hospital, Liverpool, will serve to indicate the possibility of diagnostic error. One benign infiltrative sigmoiditis and one perisigmoiditis. Diagnosis, carcinoma. Operations necessary, however, for relief of obstruction. Diagnosis with this class of patients becomes a marked desideratum, for, unless there be far advanced disease, urging immediate relief, they may have their choice between prolonged intrasigmoid and constitutional therapy, usually resulting in resolution and surgery. The well-established general rule that cancer is of comparatively rapid growth need not be subverted to account for findings of sigmoid carcinoma with prolonged history of disease. The prolonged symptomatology is that of a curable, precancerous, benign pathology terminating in carcinoma. It would be an error to leave an impression that infiltrative disease does not occur in other segments of the colon. But when this has been encountered the condition is such that the sigmoid segment has been usually regarded as the primary seat of disease which extended proximalward. There are a few reports in which the cecum and ascending colon have been regarded the primary seat, but these make no mention of the condition of the sigmoid or the etiologic factor of contact and give no help in this particular. In 1904 Monserratt, who has given much attention to this condition, removed an obstructing mass from the transverse colon and thought he was dealing with malignancy. We assume he had no help from the pathologist, and in 1906, with more recent knowledge, he corrected his diagnosis and recognized it as a benign infiltrative lesion.

Dr. Hirschman writes: "I recall a case that I saw in consultation at Jackson, Mich., two months ago, with symptoms of hemorrhage, diarrhea and emaciation simulating malignant ovary in a woman, 50 years old. Sigmoidoscope revealed eight adenoid polypi situated in upper rectum and lower sigmoid. No sign of malignancy whatever. The interesting feature to me was the close simulation of the symptoms to rectal cancer."

Niles writes: "In spite of the absence or scarcity of statistical operating-room and post-mortem evidence, there are good reasons for believing that the sigmoid must often be the site of important pathologic processes deserving surgical consideration, of which only the small proportion that terminate in cancer or complete obstruction of the bowels are usually recognized."

The urgent need of knowledge of the pathologic anatomy of sigmoid disease is apparent, and this will, no doubt, be soon supplied as clinical experi-

ence is rapidly leading to wider recognition. Autopsy, March 8, 1908, showed a sigmoid of unusual length, with sharp angulation and cicatrix, from ulceration, at the junction with the descending colon. The first loop examined bent sharply upward on the median side of the descending colon, reaching almost to the splenic flexure. The second arm of this loop lying directly in front of the first and in contact with it and the descending colon, reached the left iliac fossa, at which point there commenced a constriction eight inches in length, four of which was a dense cord, the lumen being narrowed to the extent of allowing, under much pressure, pieces of feces to pass not larger than one-quarter inch cube. The last description is advisedly made, for the feces broke up into small, irregular, cuboid particles, with rounded angles, and hard, unyielding points that sharply pricked the skin of the hands. The disease arising from the chemical influence of such a condition may readily be comprehended, but the probable mechanical destruction from such cutting débris is much in excess of my former already pronounced impression. Distalward of this was a large loop with a mesentery permitting it to reach spleen, pancreas and liver, as far as to the level of the trochanter on the left thigh and the anterior superior iliac spine on the right side. Further distalward a stricture, 5 inches in length, the lumen being narrowed similar to that in the stricture above described. The remaining part folded into the true pelvis and above it, a fold of which, concavity upward, bent under on itself from right to left joining the rectum at third sacral vertebra. Infiltrative sigmoiditis converts the organ into a narrowed tube, with hardened parietes, sometimes involving the whole of the organ, when short, or segments of it as just detailed. When stenosis is approaching from carcinoma we expect it quite steadily to increase, perhaps to occlusion with the attendant train of symptoms, but the man to whom reference is made in the autopsy had the symptoms of serious obstruction for years, the condition still permitting of the passage of gases and liquid or semisolid feces. There had at some time been an extensive inflammation of the mesosigmoid, as vessels were obliterated, there was extensive cicatricial tissue in the body of it, and the circulation to the sigmoid had been largely anastomotic.

For more than a decade Robinson has maintained that muscular trauma accounts for much adhesion found in the abdomen, and Morris, in bringing forward prominently the "spider web" adhesions, as, for example, at the hepatic flexure and cholecyst, coincides with Robinson as to eti-

ology and credits him with priority. I am convinced that the general conception regarding disease on both sides due to trauma from the psoas is inadequate, and this especially applies to the sigmoid.

An autopsy, March 8, showed distal descending colon bound unusually close, so that the sigmoid in rising over the psoas muscle was very closely applied to it; numerous adhesions from sigmoid to psoas, and the mucosa and parietes, corresponding to the area, thickened.

Just as at the pylorus, the highly developed muscularis of the sigmoid is subject to spasm in disease. The relaxation of this spasm by belladonna gave the atropin therapy for constipation its impulse. It is a functional pathologic disturbance arising from irritation. In lean subjects, the sigmoid being empty, when spasm is present in that part passing over the psoas, it can be palpated, the feeling of which is semicordlike. This gives rise to great distress from obstipation.

A quick relief from pain in irritable rectal disease through sigmoid therapy when disease in both organs was coincident led, in a letter of inquiry to several surgeons, to asking for observations in this particular. Short quotations only from a few replies can be made.

Dr. Beach: "Acute angulations from this portion of the colon, or adhesions, conduce to constipation, or obstipation, which, in turn, lead to proctitis and various lesions about the anus. Sigmoiditis is the key to many cases of constipation and is responsible in not a few instances for sequences, as hemorrhoids and prolapse of the anal rectum."

From Dr. Jelks: "Ulceration and stricture higher up always add gravity to a disease in the rectum. Pathologic processes in colon are prone to produce similar troubles in the rectum if that process, higher up, is of an infectious nature."

From Dr. A. B. Cooke: "It has been my observation that sigmoid pathology exerts its influence upon the other pelvic viscera as frequently as it does upon the rectum."

From Dr. Evans: "The sigmoid being so closely related anatomically to the rectum, the sigmoid being heavily laden with feces, plays a strong factor in rectal disease."

From Dr. Samuel T. Earle: "I am sorry I can not give you much information on the subject of intrasigmoid pathology and its effects on diseases of the rectum. I have had some very interesting operations for the relief of symptoms produced by abnormally long mesosigmoids, which were promptly relieved by straightening out the acute flexures of the sigmoid and attaching it to the abdominal wall."

From Dr. MacMillan: "Some cases of rectal disease are undoubtedly secondary to pathologic lesions in the sigmoid. Irritating discharges from the latter produce proctitis, fissure, etc."

From Dr. Ricketts: "There is much sigmoid disease, as polyps, adenomata, papillomata, etc., resulting in enlarged blood vessels, especially varicosities and increased nerve filaments, with bleeding, pain, proctitis, tenesmus, etc., referable to the rectum."

The portal circulation must be prominently disturbed by reason of various sigmoid pathologies, and the prompt beneficial results obtained in allaying rectal irritability and congestion by sigmoid therapy lead to the consideration that the usefulness of cholagogue medication is due, through its laxative or purgative action, to promoting better sigmoid conditions.

It was the intention to report the findings of 100 examinations with the sigmoidoscope and those in as many autopsies, but this could not be completed at this time and can be reported later. Sigmoidoscopy in twenty cases recently examined showed an abnormal condition of the sigmoid in all but one. These conditions found were congestion, erosion, ulceration, catarrhal manifestations, impaction and loss of resiliency of the parietes, disturbing the physiology of the organ. Some had spontaneous pain referable directly to the sigmoid in the left iliac fossa, others pain upon pressure only. Some in which the instrument showed sigmoid disease, the treatment of which gave early evidence of the patient's improvement, had no pain. In the one case that did not show any of these conditions, the instrument turned the promontory very readily, causing no pain whatever, passing directly its full length, without inflation, into the sigmoid, the patient in right lateral position. This is unusual. There was no rectal irritability, the sphincters, neither hypertrophied nor spastic, the sigmoid and mesosigmoid, I take it, being short. The mucosa was normal in color and none of the abnormal conditions mentioned were present.

REASONABLE ASSUMPTIONS.

First.—Angulation and ulcer in the sigmoid are frequently associated, the usual sequence being ulcer and angulation.

Second.—Clinically, ulcer is the medium ground between benign, inflammatory and malignant disease in the sigmoid and is the only pathology recognized, that harmonizes our present knowledge, as intermediate, resultant from the anatomy and function and antecedent to carcinoma.

Third.—The presence of the non-recognized sigmoidal factor in pelvic disease may account for obscure postoperative pain which occurs in some cases with faultless technic and the removal of the pathology of the oviductal tract.

Fourth.—The relation of ulcer and carcinoma in the sigmoid is analogous to that in the gastric and other abdominal regions, where late investigation is demonstrating that ulcer is essential to the growth of cancer.

Fifth.—The syndrome of sigmoid disease is so frequent as to indicate that the sigmoid segment is the one of predilection for benign disease in the colon.

Sixth.—The absorption of toxins in the saccharolytic and indolic types of chronic excessive intestinal putrefaction from the anaerobes is greatly increased in sigmoid disease, resulting in irritability, quick fatigue, depression, pronounced melancholia and sometimes the picture of pernicious anemia.

Seventh.—The general impression of the sigmoidal factor, either as concomitant or etiologic, in relation to rectal disease, is inadequate.

CONCLUSIONS.

First.—Favorable conditions exist in the anatomy and physiology of the sigmoid for the production of ulcer, the most frequent pathology of the organ.

Second.—Realizing in the sigmoid the maximum density and infection of the feces, here is also realized the maximum mechanical and chemical effects on the mucosa, with stercoral sigmoiditis, typical spasm from hyperesthesia, troublesome constipation and neurasthenic reflexes as results.

Third.—Much sigmoid disease results through trauma from the dorsal surface of the psoas muscle.

Fourth.—Distention of the colon, discharge of blood or mucus, or both, constipation, left iliac pain or pain along the course of the sigmoid, or obscure abdominal pain, hypochondriasis, or melancholia, gastric disorders, obscure pelvic pains, symptoms indefinitely referable to the urinary tract, pain while feces are passing through the sigmoid, are some of the conditions that indicate sigmoid involvement and in which an examination with the sigmoidoscope should be made.

Fifth.—Whether sigmoid disease is produced by pathogenic bacteria, constipation, pressure of hardened feces, hyperacid condition, angulation, irritable sphincters, or other rectal disease, by accumulations of feces in acquired diverticuli which occur oftener in the sigmoid than in any other

part of the intestinalis, or by trauma from the psoas, our duty lies in the recognition of the seriousness of its terminal and the manifestations of its early pathology. Action in keeping with this conviction, when intra-sigmoid therapy is ineffectual, will contribute largely to surgery in the production here of a low mortality.

PENETRATING ABDOMINAL WOUNDS.

WITH REPORT OF CASES.*

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These cases I believe to be fair examples of the usual run of abdominal wounds in civil life. Though they are none of recent date, I present them for case reports, hoping that the risk of incurring unfavorable criticism will be overbalanced by the fact that they are to-day, with the exception of one, living and strong, having apparently suffered no ill effects either from the injury or the operation.

CASE 1. Perforating Gun-shot Wound of Abdomen.—R. M., aged 28, occupation iron molder. The shooting occurred Dec. 20, 1905, at 9 a. m., after which the patient struggled with his assailant, succeeding in knocking him down and securing the weapon. Walking a distance of five blocks, he sank to the ground, exhausted. Admitted to the City Hospital at 11:15 a. m. with a wound from a 38-caliber revolver bullet, entering three inches to the left of the median line and two inches below the level of the umbilicus. Just above the crest of the left ilium, one inch posterior to the postaxillary line, the bullet was palpated, situated immediately under the skin. Sensorium bright, active; patient restless, complaining of constant nausea and vomiting repeatedly. Face and lips pale, pupils dilated. Pulse 100, soft, full and regular. Rectal temperature 97.4. Respiration purely of costal type. Abdomen distended, tense, painful and tender upon gentle palpation. Muscular rigidity marked; slight flatness elicited in both flanks.

Under ether anesthesia, median laparotomy revealed abdominal cavity filled with free blood, one large perforation in the omentum and four perforations in the small intestines. Despite deep anesthesia, the abdominal muscles remained perfectly rigid, making exploration extremely difficult and necessitating an undesirable extension of the original incision. The perforations were closed with purse-string sutures, covered by a layer of Lambert sutures, using catgut. The difficulty of approximating the wound edges was

greatly increased by the enormous intestinal distention which had developed, making tension on the sutures unavoidable. Postoperative course was uneventful, with the exception of continued abdominal distention, leading to localized suppuration along the line of suture. Temperature remained below 100, pulse ranging from 82 to 110, until Jan. 4, 1906, the sixteenth day after operation, when trouble was announced by a rise of temperature to 102.4, and a pulse rate of 120, and the complaint of severe abdominal pain, at first diffuse in character, later becoming localized in the right iliac fossa. Contraction of the right rectus muscle became distinct, and on the following day a well-defined mass appeared over the appendiceal region.

Present Status.—Temperature 101.8, pulse 120, small and feeble, severe abdominal distension, constant vomiting, stercoraceous in character and extreme exhaustion. A circumscribed suppurative peritonitis had manifested itself on the eighteenth day after the operation. Under local anesthesia the mass was incised, and a large pus cavity, walled off by dense exudate, was evacuated and drained. Full recovery after four weeks, and in good health to-day, being able to continue his former occupation as iron molder.

CASE 2. Perforating Gun-shot Wound of Abdomen.—C. B., aged 50, occupation carpenter. On Aug. 3, 1905, at midnight, while struggling for the possession of a revolver, the patient sustained a gunshot wound in the left side of the abdomen, the weapon being held in a position posterior and to the left of the victim. After injury he continued to fight for twenty minutes, when, having downed his assailant, he walked a distance of two blocks, where he sank to the ground, overcome by sudden weakness. The only symptoms complained of were a sense of heaviness in the lower abdomen, not referred to as actual pain, and later extreme exhaustion. No nausea nor vomiting.

Arrived at the City Hospital at 1:30 a. m. in a state of shock, facial pallor conspicuous, and body surface bathed in cold perspiration. Pulse rapid, small, weak, easily compressible. Abdomen flat, muscular rigidity marked, dullness in both flanks distinct. A bullet from a 32-caliber revolver had entered the left side one inch above the crest of the ilium, in the midaxillary line. No nausea, no vomiting, no pain; mental condition active.

The pulse growing rapidly weaker, median laparotomy under ether anesthesia was promptly done. Upon opening the peritoneum a stream of blood spurted forcibly from the cavity, as if under tense pressure. The abdominal cavity seemed literally filled with blood. The failing pulse, under the sudden relief of intra-abdominal pressure, became imperceptible, demanding quick action. Three perforations in the small intestines and one in the large intestine, all bleeding con-

* Read before the Indianapolis Medical Society, April 7, 1908.

siderably, were provisionally clamped for the administration of an intravenous salt infusion, which was followed by strong stimulation with camphor and strychnia. Improvement in pulse was prompt, however, also increasing the oozing especially noticeable in the left pelvic cavity. The intestinal perforations having been sutured, purse-string method, covered by a single layer of Lembert stitches, being employed, the site of hemorrhage was firmly packed with gauze, extending it through the wound of entrance, which was situated immediately above. I might mention that this method was resorted to only after repeated efforts failed to disclose the exact seat of bleeding. The patient was discharged from the hospital in three weeks, after an uninterrupted recovery.

CASE 3. *Perforating Stab Wound of Abdomen.*—T. B., aged 27, occupation laborer. At 1 p. m. Aug. 6, 1907, while leaning over a friend, in the act of assisting from the ground, patient was stabbed three times, his assailant being back and to the left of him. Instantly a lancinating pain through the abdomen was felt followed by extreme prostration. Nausea but no vomiting.

One hour later, at the City Hospital, the patient was found in a state of severe shock, with dilated pupils, cold body surface, pulse 100, small, weak and very compressible. Complained bitterly of thirst and nausea. Local examination revealed a stab wound three-quarters of an inch above the left superior iliac spine, extending obliquely downward and forward for about two and one-half inches, and bleeding profusely; a second incised wound, deep into the serratus muscle, on a level with the inferior angle of the left scapula, from which also severe hemorrhage escaped, evidently from the posterior intercostal artery; a third wound was located at the lateral border of the left rectus abdominis, one-half inch below the level of the umbilicus. Abdominal muscles only slightly contracted, some pain without much abdominal tenderness on pressure. Under local anesthesia and after thorough surgical preparatory precautions were taken, the wound was enlarged. Exploration, under inspection, gave evidence of the knife blade having penetrated down to the peritoneum, this showing areas of deep congestion, which served to my mind as an indication for immediate laparotomy. Under ether anesthesia, an incision along the lateral border of the left rectus muscle resulted in finding a puncture of the parietal peritoneum, the underlying viscera having escaped injury. Uneventful recovery.

CASE 4. *Perforating Stab Wound of Abdomen.*—M. D., aged, 23, occupation laborer. Aug. 4, 1907, at 9:30 p. m. patient was stabbed one inch above the left iliac crest, in the mid-axillary line, his assailant attacking him from the rear, plunging the knife transversely into the

abdomen. Instantly he fell to the ground, exhausted from pain and weakness. After an interval of five minutes repeated vomiting set in, and the abdominal pain became agonizing in character.

On admission to the City Hospital, one hour after the stabbing, the patient was in a condition of marked shock, apathetic, cold, clammy skin, subnormal temperature (97), pulse 110, of low pressure. From the wound, two and one-half inches in length, about eight inches of small intestine prolapsed, in which an incised wound one inch in length was found, perforating only the outer wall of the intestinal coil. Under the application of towels, wrung out in hot normal salt solution, good color returned to the tissues. The intestinal cut being in a direction transverse to the long axis of the bowel, it was sutured at right angles in order to avoid a possible kinking. Careful enlarging of the wound and exploration revealing no evidence of further injury, a cigarette drain was inserted and the incision closed. Discharged August 25, after an uninterrupted recovery.

CASE 5. *Perforating Stab Wound of Abdomen.*—F. L., aged 28, occupation waiter. At 2 a. m. July 29, 1907, the patient received a stab wound in the eighth intercostal space, left side, just within the anterior axillary line. According to the history, the stab was made from a position to the left of the patient, directly inward. One and one-half hours afterward, upon examination at the City Hospital, he was found in a condition of semi-stupor, shock marked, pulse rapid and feeble, without volume. Respirations hurried and shallow, irregular and jerky in rhythm. No nausea, no vomiting, though repeatedly asking for a drink of water. Vesicular respiratory murmur seemed unimpaired; chest percussion and auscultation revealed no evidence of intrapleural fluid. Local palpation found the abdominal muscles rigidly contracted, eliciting extreme abdominal tenderness on pressure. No distention, no dulness.

Operation under ether anesthesia. Incision six inches in length extending from the costal arch downward along the left lateral border of the rectus abdominis. The intestinal coils were bedecked with blood and some free blood in the peritoneal cavity was found. The stomach was enormously distended, and, as the patient now unfortunately vomited, the stomach contents, consisting mainly of beer and undigested food, was forced out of a rent in the anterior wall of the stomach, near the cardiac end. The vomiting persisting, the rent was temporarily clamped until it subsided, and then a silk suture, purse-string superimposed by a layer of Lembert's was employed to close the opening. Orientation through a small incision in the omentum showed posterior wall of the stomach uninjured. Careful search for other lesions elicited none within the

abdomen. The perforations through the pleura and diaphragm, along the tract of the original wound, permitted the entrance of air, plainly audible, upon each respiratory effort. An attempt to repair the damage in the diaphragm from within proving futile, two inches of the eighth rib were resected, and the perforations closed through the transpleural route. During this procedure it was conclusively demonstrated that the lung had escaped all injury. A small cigarette drain was inserted before closing the wound. Death occurred on the fourth day, with evidence of double pneumonia.

The coroner's autopsy record notes the following: "Abdominal incision six and one-half inches long, one and one-half inch to the left of the median line, another incision over the left eighth rib, four inches in length. No evidence of inflammation. Upon opening the wound it is seen that a section to the extent of two inches had been removed from the eighth rib; abdominal organs normal in appearance. Pleura on the right side adherent throughout, slight recent adhesions in lower part anteriorly. Lower posterior portion of lungs covered with exudate and of a consistence of liver. Opposite the resection of the rib the wound in the diaphragm was drawn together by surgical sutures and healed. At the cardiac end of the stomach on the anterior surface appears a wound two inches long, drawn together and firmly healed. Cause of death, septic pneumonia."

The object of presenting this paper is not to attract attention to the full recovery of four of five consecutive cases, but to lay stress on the unreliability, in a large percentage of cases, of the classical or text-book symptoms in the early hours, at a time when most good by surgical interference can be accomplished, and to emphasize the great importance of careful scrutiny of each individual case.

Text-books tell us that the "evil effects incident to injury to the viscera are prompt, pronounced and self-evident." They outline for us a plan of differential diagnosis, and give us a classification similar to the following one:

A. General symptoms.

1. Shock and internal hemorrhage (acute anemia).
2. Vomiting, especially characteristic of lesions of the gastrointestinal tract.

B. Local symptoms.

1. Muscular rigidity.
2. Pain.
3. Dulness over abdomen.
4. Tympanites.

Too much stress must not be laid on any one symptom. It may be impossible to distinguish shock from internal hemorrhage, the direct treat-

ment of each differing so widely. At the time when we are called upon, soon after the receipt of the injury, to decide the proper course of treatment, we can not always with certainty determine the presence of concealed hemorrhage, visceral lesions or infection. Are we to wait until the "evil effects are self-evident"? Can we conscientiously shoulder the responsibility of incurring this risk?

Former teachings forbade operative intervention in the absence of urgent symptoms and ordered absolute rest, opium and ice-cap, and to wait for the signs of a beginning peritonitis or the physiologic effect of a concealed hemorrhage before interfering surgically. Present-day surgery demands early intervention to avert a possible fatal outcome from a neglected hemorrhage or a peritonitis.

A résumé of the cases cited will illustrate the accuracy of the above contentions:

Case 1 presents symptoms almost pathognomonic of its class and stands as a typical example of a perforating abdominal wound.

Case 2 proves an exception in presenting no definite symptoms of internal hemorrhage, yet having an abdomen full of free blood. The patient was neither nauseated nor did he vomit, yet he had suffered four intestinal perforations. His pulse was full and regular, though soft. The local symptoms of abdominal rigidity, tenderness and flatness, with the history of the injury, indicated more accurately the true nature of the lesion.

Case 3, however, presented positive symptoms of hemorrhage and shock, significant in that, with a penetrating abdominal wound, no intra-abdominal lesion existed. The presence of abdominal pain and muscular rigidity tended only to strengthen the suspicion of a perforating injury; exploration of the wound offered no solution. Under the existing circumstances, expectant treatment was positively unjustifiable; surgical intervention did no harm and perhaps arrested the development of a peritonitis.

Case 4 was one in which no difficulties in diagnosis arose. There was no choice in the method of treatment, operative indications being obvious.

Case 5 showed definite symptoms of internal hemorrhage, as well as of shock, but vomiting was conspicuously absent, though his stomach had been perforated. The local manifestations were characteristic.

CONCLUSIONS.

1. All abdominal wounds are serious, however unimportant they may appear at first observation.

2. Except in the most fulminant cases, the general symptoms are not proportionate to the severity of the lesion soon after receipt of the injury.

3. Prompt surgical intervention, surrounding circumstances permitting of the strictest aseptic technie, is indicated in all cases of penetrating abdominal wounds, statistics showing that 95 per cent. of penetrating wounds are perforating.

4. In case of doubt the presence of penetration should be determined by enlarging an exploring wound under the most careful asepsis and by actual inspection, *not by probing with finger or instrument.*

5. Local symptoms are significant, muscular rigidity and pain being the most important, tympanites being a late manifestation.

6. It can not be denied that a certain number of cases recovered treated by the method of systematized expectancy, yet the actual nature of the lesion sustained, in this small percentage, remains always unknown. *Therefore, it is most uncertain and extremely hazardous to rely on Providence or good luck to seal over perforations, with omentum, or by intestinal adhesions, or to depend upon the natural cell protection to overcome infection.*

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from page 104, Vol. II.)

REMINISCENCES FROM MADISON.

The late Dr. W. T. S. Cornett, of Madison, narrates some interesting reminiscences in the Transactions of the Indiana State Medical Society, 1874, p. 30, from which the following extracts are copied:

"I came to the State of Indiana in the spring of 1824 for the purpose of practicing medicine and located temporarily in the County of Dearborn. In the spring of 1825 I moved to Versailles, Ripley County, where most of my professional life has been spent. On coming into the state I was informed that the law required me to be licensed to practice by the society of the district in which I lived; otherwise I would be indicted and fined.

EARLY STATE MEDICAL SOCIETY.

"Each judicial constituted a medical district, and there was a state medical society made up of delegates elected annually by the district so-

cieties. I called on the censors of the society, satisfied them in regard to my qualifications, and received from them a permit to practice till the next meeting of the society, which was held at Lawrenceburg. At the meeting of the society I was admitted to membership and received a diploma according to law. At that meeting, or the next, I have forgotten which, I was elected a delegate to represent the society at the next meeting of the state society to be held at Indianapolis. I prepared a professional essay and started for Indianapolis on horseback, and accomplished the journey (65 miles) in three days of hard travel through deep mud and over broken causeways. The president of the state society was Dr. Samuel Grant Mitchell, of Indianapolis, an elderly gentleman, somewhat corpulent and short of breath from asthma, perhaps. The society met at Dr. Mitchell's office. There were but few in attendance. Their names were as follows: Drs. Mitchell, Dunlap, Coe and Mothershead, of Indianapolis; Dr. Sexton, of Rushville; Dr. Bell, of Shelbyville, and myself, from Versailles. Dr. Mothershead was then a very young man and a partner to Dr. Mitchell.

"The president read an address on the occasion, and, on getting about half way through it, found that he had lost a sheet and became much embarrassed. I finally moved that the lost sheet be stricken out, which was carried unanimously, and he proceeded with the remainder of the address. Finding that no one but myself had prepared an essay for the occasion, I proved too diffident to produce it and took it home without reading. Afterward I prepared an abridgement of it, which was published in Dr. Drake's journal at Cincinnati. In the print I found numerous typographical errors, which annoyed me not a little. The meeting to which I have referred was the last of the state medical society, as provided for by law, the politicians and people having adopted the idea of free trade in medical matters, which seems likely to continue for all time to come. So be it. If rational medicine can not take care of itself let it perish. I am now, so far as I know, the only surviving member of the original state medical society.

"For a number of years I was the only physician in Ripley County; had to travel all over it on horseback by day and by night, without regard to weather or remuneration for services. Occasionally I found myself lost in the woods at night, and would have to tie up my horse and make my bed on the ground until morning. The nearest physicians with whom I was acquainted were Drs. Pereeval and Ferris, of Lawrence-

burg; Dr. Torbet, of Wilmington; Drs. Haynes and James, of Rising Sun; Drs. Watts, Howes and Canby, of Madison; Dr. Peabardy, of Vernon; Dr. Hartclay, of Greensburg; Dr. Oliver, of Brookville, and Dr. Gillespie, on his farm twenty miles south of me, all of whom are in their graves save Drs. Watts and James, who have long since retired from business. I can only make honorable mention of these physicians, having no data upon which to found biographical sketches of them which would be reliable. At the period of my advent into professional life (50 years since) medical books were very scarce, particularly so in the West. The physician who could afford one work on each branch of the profession was considered well off. The book stores in Cincinnati, in 1824, could not furnish a work of each branch of the profession. On going there to purchase my library, I could not find a work on *materia medica* for sale in the place, and had to appeal to a young physician who had lately arrived from Philadelphia, who was so obliging as to sell me the work of Murray with notes by Chapman.

"In the year 18— my friend, Dr. Charles Parry, late of Indianapolis, read a paper on the treatment of congestive fever with quinin, before the Academy of Medicine at Philadelphia, which attracted much attention, and he was invited to repeat it to a fuller house, which he did. After this, numerous essays soon made their appearance in favor of the treatment of remittent fever with quinin, and the former practice was soon superseded.

THE EARLY SURGERY OF INDIANA.

"In surgery, as well as in medicine, there has been an advance within my remembrance. I knew a surgeon half a century ago who made it a rule to trephine in every case of fracture of the skull, whether there was depression of the bone or not. He boasted that he had bone buttons enough, bored from the skulls of his patients, to furnish a full set for a double-breasted coat. Fractured skulls were more common then than now, the temperance reformation not having commenced, or even been seriously thought of, save by one man, and that man was Dr. Benjamin Rush (see his great address on the abuse of ardent spirits, Volume I of his work, A. D. 1818). In 1829 Dr. Daniel Drake made a most powerful and eloquent appeal to the public on this subject in an address delivered before the Hamilton County Agricultural Society, which

did much good in the West in stirring up organized action against this most monstrous of all evils on earth.

"Half a century ago, surgeons, and the people generally, practiced blood-letting for almost every injury. Sir Charles Bell was among the first to denounce this practice in concussion of the brain. He said, in such a case, the surgeon would say bleed, and the landlady would say give him a glass of brandy, and that he (Sir Charles) would in this case take sides with the landlady. Half a century ago I have seen lint dipped in whisky used with good results as an application to wounds. The lint should never be allowed to get dry. I have used this dressing more or less throughout the whole of my professional life, and have never seen erysipelas occur in a wound where it was used. Its action is threefold, as it stimulates the injured vessels, tends to ease pain, and, lastly, prevents the decomposition of purulent matter, which is poisonous.

"The greatest advantage of the metallic suture over thread is that thread absorbs pus, which decomposes in it and becomes poisonous, while metal absorbs nothing. The tincture of arnica has acquired a great reputation as an applicant in contusions. It is the whisky, and not the arnica, which is entitled to whatever credit is due in this case. Whisky is sometimes good as a medicine if properly used. I have never, and never will, so use it as to turn a sick man into a drunkard."

EARLY STATE MEDICAL SOCIETY.

In the Transactions of the Indiana State Medical Society for 1874, p. 26, the late Dr. W. B. Fletcher, of Indianapolis, records some interesting history of the "Early State Medical Society," from which the following extracts are taken:

"A judicial was considered a medical district. A district medical society was formed in June, 1817, in Vincennes, and at a meeting of the same in May, 1818, delegates were appointed to meet with similar delegations of other district societies and form a state medical society. F. S. Shald and Phillip Bates were such delegates. The state society was not formed, however, until 1820, when it met in Corydon, then the capital of the state. Afterward, in 1826, it held its meeting in Indianapolis, the seat of government having been removed thither. These facts are obtained from the *Western Censor* and other papers of the period, extracts from which we give:

"The Medical Society of the State of Indiana met at Corydon on the 10th. The following gentlemen were elected officers for the ensuing year, viz.:

"President—Asahel Clapp, New Albany. Vice-President—S. Everts Union County. Secretary—L. Dunlap, Indianapolis. Treasurer—D. B. Mitchell, Corydon. Censors—David Oliver, Brookville; G. L. Murdoch, Brookville; C. Fullerton, Princeton.

"JANUARY 4th, 1823.—At the fourth annual meeting of the Medical Society, which took place at Corydon on the 11th ult., the following gentlemen were elected officers for the ensuing year:

"President—Dr. D. G. Mitchell. Vice-President—Dr. S. Everts. Secretary—Dr. J. Fowler. Treasurer—Dr. Snyder. Censors—Drs. J. E. Bush, Snyder, and A. Clapp.

FIFTH DISTRICT MEDICAL SOCIETY.

"First Meeting at Indianapolis.—Pursuant to a resolution of the State Medical Society a number of the practicing physicians of the Fifth Judicial District met at Indianapolis on Monday, the 1st day of May, 1826, and proceeded to business. Dr. Isaac Coe was chosen chairman, and K. A. Scudder, secretary. The following officers were chosen for the ensuing year:

"President—Dr. Isaac Coe. Secretary—Dr. Livingston Dunlap. Treasurer—Dr. K. A. Scudder. Censors—Drs. Laughlin, Sexton, and Morris. Delegates—Drs. S. G. Mitchell, Isaac Coe, and Sexton.

"Resolved, That each annual meeting of this society be on the first Monday in May, and the semiannual meeting on the day preceding the meeting of the State Medical Society.

"The society then adjourned.

"ISAAC COE, President.

"K. A. SCUDDER, Secretary."

FROM HISTORICAL NOTES ON INDIANA, PUBLISHED
AND COMMUNICATED TO THE GAZETTE,
INDIANAPOLIS, MARCH 6, 1822, BY
DR. S. G. MITCHELL.

"MARCH 6, 1822.—The predisposing influences that caused the citizens of Indianapolis to become a prey to intermittent and remittent fevers were numerous: the thickness of the forest, with an unusual wet or damp season; a numerous concourse of strangers crowded together; great fatigue of moving and anxiety of mind; uncomfortable accommodations; liberal use of fresh meat, more especially fish, which was used in great abundance. The disease may have existed in a certain constitution of the atmosphere, which caused the marsh miasma or deleterious effluvia to be worse on the margin of the water-course, which was a fact, and in the east

it prevailed more generally than in the west. Those who escaped lived off from the river. Out of 1,000 souls in town on the donation, and the farms surrounding the town, at least 900 sickened during the prevailing epidemic. Twenty-five deaths occurred before the last of October. About that period the place was restored to health. Its fatality was principally amongst children, but the town will long lament over the loss of some of its most favorite citizens. The symptoms that marked our epidemic were such as medical writers recognize in the introduction of common violent intermittent and remittent fevers; debility, languor, yawning and stretching, with a listlessness and inaction to motion; coldness then commences in the extremities and soon covers the body with sensations, to the patient, of cold water being poured over them. In some cases the coldness only produced chills; in other cases it produced universal convulsive shaking. It has, then, improperly been called ague. Very few cases occurred that we might call a well-defined case of ague and fever. The symptoms that succeeded the cold stage were a dry, burning, hot skin, with a red, tense and swollen appearance; pains violent and shifting to different parts of the system; the pulse quick, but not universally strong; the bowels constipated, and great thirst. After some hours of pain and suffering, a perspiration became universal, the pulse diminished in frequency and became full and free, and all the functions of the system were restored to their natural order. The species of fever differed in different patients, and in the same patient, in different attacks, sometimes a quotidian, sometimes a tertian, and at other times assumed a quartan type. It was a disease that readily yielded to appropriate remedies, and as readily again recurred. During the hot stage, the physician's object was to promote perspiration, and to accomplish that object he selected such internal and external remedies as he thought advisable. Afterward the stomach and bowels were well prepared for the reception of Peruvian bark—it was genuine, and given in spirits, in large quantities—a valuable medicine, and rarely disappointed the physician's expectation. The disposition the fever had to recur again and again, and the universal attack of the disease, and the few deaths in proportion to the sick, was a remarkable circumstance."

THE MEDICAL COLLEGE AT LAPORTE.

Dr. Tompkins Higday, formerly of Laporte, records in the Transactions of 1874, p. 24, some historical facts concerning the Indiana Medical

College at Laporte, Ind., from 1842 to 1850, from which the following quotations are made:

"Daniel Meeker, the originator of the college, was born in Schoharie County, New York, Dec. 17, 1806; attended his first course of lectures at Fairfield, N. Y.; graduated at the close of his second year, at Willoughby, Ohio, and located in Laporte in May, 1835. He first organized a spring course of lectures, which was given during March and April, 1842. A charter for the Laporte University was then secured, and the first regular course of medical lectures began the following autumn, thus:

"Spring Course, Eight Weeks.—Daniel Meeker, M.D., anatomy and surgery. Jacob P. Andrew, M.D., obstetrics and diseases of women and children. Nine matriculates.

"1842-3. The regular courses were sixteen weeks. Daniel Meeker, M.D., anatomy and surgery. Franklin Hunt, M.D., *materia medica* and botany. Jacob P. Andrew, M.D., obstetrics and diseases of women and children. Gustavus A. Rose, M.D., theory and practice. John B. Niles, A.M., chemistry. Thirty matriculates; one graduate.

"1843-4. The same, except Jacob P. Andrews, M.D., in place of G. A. Rose, M.D., theory and practice. Forty-three matriculates; four graduates.

"1844-45. Daniel Meeker, M.D., surgery. George W. Richards, M.D., St. Charles, Ill., anatomy. Moses L. Knapp, M.D., of Chicago, *materia medica*. Nichols Hard, M.D., of Aurora, Ill., obstetrics and diseases of women and children. Daniel E. Brown, M.D., Schoolcraft, Mich., theory and practice. John B. Niles, A.M., chemistry. John L. Torrey, M.D., of Elgin, Ill., demonstrator. Sixty-three matriculates; ten graduates.

"1845-6. Daniel Meeker, M.D., anatomy and physiology. Azariah B. Shipman, M.D., of Cortland, N. Y., surgery. Moses L. Knapp, M.D., *materia medica*. Nicholas Hard, M.D., obstetrics and diseases of women and children. George W. Richards, M.D., theory and practice. John B. Niles, A.M., chemistry. John L. Torrey, M.D., demonstrator. Eighty matriculates; 17 graduates.

"1846-7. The same corps of professors. Ninety matriculates; 20 graduates.

"1847-8. Daniel Meeker, M.D., anatomy and physiology. A. B. Shipman, M.D., surgery. Elizur Deming, M.D., of Lafayette, Ind., *materia medica*. (The lectures were given by the faculty.) Theory and Practice. Nicholas Hard, M.D., obstetrics and diseases of women and children. Tompkins Higday, M.D., adjunct profes-

sor of anatomy. John B. Niles, A.M., chemistry. One hundred and one matriculates; 21 graduates.

"1848-9. Daniel Meeker, M.D., anatomy. A. B. Shipman, M.D., surgery. Elizur Deming, M.D., theory and practice. J. Adams Allen, A.M., M.D., Kalamazoo, Mich., *materia medica*, therapeutics and medical jurisprudence. Nicholas Hard, M.D., obstetrics and diseases of women and children. T. Higday, M.D., physiology and general pathology. John B. Niles, A.M., chemistry. George W. Lee, M.D., demonstrator. Ninety-three matriculates; 30 graduates.

"1849-50. Same corps of professors as former years. George W. Lee, M.D., demonstrator. Sixty-five matriculates; 24 graduates.

"Spring Course at Lafayette, Eight Weeks.—Elizur Deming, M.D., theory and practice. T. Higday, M.D., anatomy and physiology. Daniel Meeker, M.D., surgery. J. Adams Allen, A.M., M.D., *materia medica*, etc. R. T. Brown, chemistry. Jos. M. Havens, M.D., demonstrator. Nine matriculates; 4 graduates.

"Many of the graduates of the school have become prominent practitioners, a few of whom are Dr. Evans, Evansville, Wis.; Dr. Lee, Shullsburg, Wis.; Dr. Brown, Madison, Wis.; Dr. Green, Marengo, Ill.; Dr. C. Hard, Aurora, Ill.; Dr. Young, Chicago; and in Indiana, Dr. Humplirey, South Bend; Dr. Butterworth, Mishawaka; Dr. Lomax, Marion; Dr. Austin, Hecla; Dr. Pettijohn, Deming; Dr. Baker, Stockwell; Dr. Webb, Franklin; Dr. Wishard, Greenwood; and Dr. Evarts, of the Insane Asylum, Indianapolis. Three of the graduates only, so far as I know, have been elected to professorships, viz.: Wells R. Marsh, to the chair of chemistry, Keokuk College, Iowa; S. S. Todd, to the chair of theory and practice, Kansas City Medical College, Missouri; and T. Higday, to the chairs of physiology and general pathology, and of anatomy, in the Indiana Medical College, LaPorte, Ind.

"In 1848 the charter was amended, changing the name from "The Medical Department of the Laporte University" to "The Indiana Medical College." The spring course was given at Lafayette, at the instance of Dr. Deming, whose object was to arouse sufficient interest there to enable him to erect a suitable building, and then have the college transferred from Laporte to Lafayette. Failing in this, he gave two courses in the Medical College at Indianapolis. At his death, I have been informed, he left a work on theory and practice in an advanced state of preparation for publication.

"Dr. Meeker gave one course on anatomy at Indianapolis and five at Keokuk, Iowa, after the discontinuance of the Laporte school. Dr. Meeker is a thorough anatomist, a bold, successful operator in surgery; a man of iron will, great physical endurance, and withal a firm believer in the resurrection of the dead; just the man to start successfully a medical college in a small town.

"Old Death," as the students familiarly called him, never failed to keep the dissecting-room abundantly supplied with fresh subjects."

MEDICAL HISTORY OF TERRA HAUTE.

The late Dr. Ezra Read, of Terra Haute, in the Transactions for 1874, p. 45, has given some valuable historical facts of the early history of that city, from which we make the following extracts:

"I settled in Terre Haute in the year 1843, as a practicing physician and surgeon, having been invited here by Dr. Ebenezer Daniels and tendered an equal partnership in his business. I had, at that time, some professional experience, having graduated at the Cincinnati Medical College (Drake's College) in 1836 and served four years in the military service of Texas—three years as staff surgeon of Gen. Felix Huston and one year as fleet surgeon upon the ship of war *Zavalla*.

"The prominent physicians of Terre Haute, in the year I settled here, 1843, were Drs. Ebenezer Daniels, Septer Patrick, Edward V. Ball and Azel Holmes.

"Drs. Irish and Brooks were here, young men, and some others not now remembered, but within a few months they sought locations elsewhere. Just prior to that time Dr. John W. Hitchcock had left, having very creditably sustained himself in his profession for several years. He was the pupil of Dr. Valentine Mott of New York, was a good surgeon, had professional merit and was recommended to this community by his preceptor; was a brother-in-law of Dr. G. W. Mears of Indianapolis.

"Dr. Daniels was a man of learning; a graduate of the Jefferson Medical College, Philadelphia; ambitious, industrious and jealous of his rights. He had studied the profession with great care; practiced it with care, and brought to his aid judgment, skill and learning. He was a good surgeon and partial to that branch of the profession. I have rarely seen any one who could more readily bring to light latent difficulties at the bedside, or more skillfully suggest proper remedies. It is no disparagement to the most learned

physicians of Indiana, at that time, to say that Dr. Daniels was in all respects their equal. He died of pneumonia in 1847, aged about 56 years.

"Dr. Patrick was a kind-hearted, blunt, honest physician, originally from the State of New York; had practiced medicine on the Wabash and in this place until his head was whitened, enjoying the confidence and respect of his medical brethren and the entire community; always poor, always industrious and faithful to the sick, and always a good physician. He attended one course of lectures in New York; was a careful observer and, from long practice, was skilled in the diseases of this locality. In the California gold excitement he went there, like many others, only to find the same obstacles he had left behind. He died in that state in the year 1858, aged 78 years.

"Dr. Ball, a native of New Jersey, was an excellent and highly esteemed citizen and a very careful and industrious physician, but lacked confidence in his own judgment and in the certainty of medicine, and was consequently vacillating in his opinions and practice. He commanded the confidence of his patients, and for more than forty years enjoyed a very large practice. He died in the year 1873, aged 73 years.

"Dr. Azel Holmes was born in Herkimer county, New York, in the year 1804; studied medicine with the celebrated Dr. Massey, and graduated in medicine in one of the New England schools. He enjoyed an extensive practice in this city for several years; had cultivated and careful ability; was exact and precise, and a most excellent physician. He went to California in the year 1850 with his brother-in-law, Joseph O. Jones, Esq., of this city, and died in Sacramento City the same year.

"The picture will not be very flattering, to those of pecuniary tastes and desires about entering the profession, when told that many years of toil and drudgery had not given to any of these physicians estates exceeding in value \$5,000, Dr. Ball excepted.

"It is due to my dead confrères to say that they were temperate, charitable and exemplary, and in all of their professional obligations scrupulously exact. As physicians and citizens their lives were without blemish and without stain.

"Dr. Henry D. Lee, a native of Virginia, settled, in early times, on a farm ten miles from Terre Haute and near Lockport, this county. He was a good physician, without pretension, and at all times commanded the esteem of medical men and the universal respect of his neighbors. He was a Christian gentleman, and through

life was occasionally in the habit of preaching in his own neighborhood and abroad. He died in 1871, aged 66 years, on his birthday.

"Dr. Hamilton, of Prairieton, in this county, was a graduate of one of the Philadelphia schools of medicine, and was eminently fitted, by education and habit, for a professional position, but died young—in the year 1851.

"I have named all of the prominent medical men in this county thirty years ago, not one of whom now lives. Of all these, I am alone left.

MEDICAL SOCIETIES.

"When I came here I found a medical society in existence which, at one time, had created a good deal of professional interest, but was then languishing and not well attended. Subsequently the society was reorganized and called the Vigo County Medical Society. The society has never excited among its members the interest it should, and generally has been in a sickly condition.

"In the year 1817, the next year after the settlement of Terre Haute and five years before that of Indianapolis, a medical society was formed at Vincennes, embracing in territory this and the county of Parke, north of us, or a distance north of Vincennes of ninety miles. Its very first members were men of distinguished character, and of earnest professional zeal, as may be known from extracts from their original proceedings, the papers now on my table and kindly furnished by Mrs. Shuler, the widow of one of its most distinguished members.

"Dr. John W. Davis, of Carlisle, Sullivan county, afterward a member of Congress, speaker of the House of Representatives, minister to China, and governor of Oregon, was one of its early members. But Dr. Lawrence S. Shuler, twice elected president of the society, sent as delegate to the first state medical society, and a candidate for Congress when this congressional district embraced a greater area of territory than one-third of Indiana, deserves more than a passing notice, for his surgical skill has been transmitted from sire to son to the present time. He was a native of the State of New York, born in 1790, and was a graduate of the College of Physicians and Surgeons, New York. One of his tickets admitting him to lectures is before me, of date 1815; also his diploma, placed at my disposal by his excellent wife. The doctor was an earnest, scientific and skillful surgeon. I enclose his own notes of a false joint successfully treated. He operated at one time upon a little girl, aged 11 years, for congenital blindness, with perfect success. The child stayed at his house several

months, and when vision was restored, Mrs. Shuler states, she was almost bewildered with joy at the wonders before her. Colors were with difficulty learned, and her friends only known, for a long time by the sound of their voices. When her father came for her he was a stranger to her eyes but a father when he spoke. He also removed a very large abdominal tumor from a lady in the seventh month of gestation. She recovered, gave birth to a healthy child, and is still living near Vincennes.

"I have repeatedly heard medical men, contemporaneous with the doctor, speak of this operation as meritorious and capital, but have not heard its character described, except that it was within the abdominal cavity and was considered hazardous and difficult. For several years he commanded the surgery of a very large scope of the country, and I have no doubt was eminently and justly entitled to it. He was father of the warden of the State Penitentiary at Jeffersonville, and brother-in-law of our worthy citizen, N. F. Cunningham, former state treasurer. Dr. Shuler practiced medicine in this city four or five years prior to his death, which took place in Vincennes in 1827 while on a visit there for a change and health, aged 37 years. He contracted a cold from exposure in visiting Indianapolis the previous winter, which settled on his lungs and terminated in consumption. Dr. Shuler transferred the Vincennes First District Society to this place when he came here, in 1822 or 1823, and kept it in a flourishing condition during his life.

"Dr. Charles B. Modesett was one of the earliest, if not the first, physician who settled on Fort Harrison Prairie, the prairie on which Terre Haute is located. At that early day the Indians greatly exceeded the whites in numbers and, for safety, most persons settled at or near Fort Harrison, then a military post, three miles north of Terre Haute, the Indians having recently been hostile and in the interest or service of the British Government. Dr. Modesett was born in Prince William county, Virginia, in the year 1784, and graduated at Prince William College in his twenty-fourth year, about the year 1808; moved to Ohio, near Cincinnati, in 1814, and to Fort Harrison in 1816. He attended the first sale of lots in Terre Haute in that year, and shortly afterward built one of the first log houses in the new town and commenced the practice of medicine. He died in January, 1848, aged 64 years. Dr. Modesett was, in manners, a courtly, dignified Virginia gentleman, and in all his intercourse with the pioneer settlers never lost

sight of his self-respect and polite manners. He was a diligent and faithful physician, enjoyed an extensive practice, and deservedly ranked with the most eminent of the profession in western Indiana.

"Dr. William Clark, a military surgeon at Fort Harrison, practiced medicine among the early settlers for a few years, and moved somewhere near Eugene, on the Wabash, about the year 1824.

"Dr. Aspinwall, from the State of New York, settled here in 1817 and died in 1824.

"Dr. Hotchkiss, from Connecticut, came here in the year 1822 and died in 1830; and Dr. Turnee, from the same state, came in 1822 and died in 1832.

"All of these physicians are highly spoken of by the early settlers as skilled in the profession, industrious and of good habits. Most of these young men had been well educated in the eastern states; were enterprising and hopeful, and came to a new country to toil for a few years and die.

"All of the above-named physicians belonged to the First District Medical Society at Vincennes or Terre Haute.

"I have thus completed, as well as I could with the material at my disposal, this imperfect sketch of the pioneer physicians of this part of the Wabash. It is the only attempt known to me of preserving even their names as a class.

COPY FROM ORIGINAL PROCEEDINGS OF THE FIRST
MEDICAL DISTRICT SOCIETY, INDIANA

"Vincennes, June 2, 1817.—In conformity to an act of the Legislature, passed the 24th day of December, 1816, entitled an "Act to Regulate the Practice of Physic and Surgery," the following censors appointed by said act met at the house of Peter Jones, in the town of Vincennes, on the first Monday in June, 1817, viz.: Elias McNamee, Jacob Key Kendall, David M. Hale and Thomas Polke, secretary. Board adjourned until 6 o'clock p. m. the same day.

"Board met pursuant to adjournment and proceeded to an examination of Wm. C. Whittlesey, Philip Barton, William Clark, Lawrence S. Shuler and John L. McCullough for the practice of physic and surgery. Ordered that the same be licensed. Board adjourned until June 3, at 3 o'clock p. m., at the house of C. Graeter, Vincennes.

"At this meeting, June 3, 1817, on motion, it was

"Resolved, That the medical censors and licensed physicians of the First Medical District proceed, according to law, to organize the board for said district.

"On balloting for officers for the board Elias McNamee was duly elected president; L. S. Shuler, secretary; David M. Hale, treasurer, and Key Kendall, Shuler, Barton, Polke and McCullough, censors.

"At a meeting of this medical organization at Vincennes, May, 1818, on motion, it was

"Resolved, That discretionary power be given to the president to appoint three persons on behalf of this board, to meet delegates appointed by the other district societies, at such time and place as shall be agreed upon for the formation of a State Medical Society.

"This is probably the first organization in the State of Indiana for the purpose of forming a state medical society. At this meeting a letter from Dr. Lyman Spalding, of New York, was read and laid before the board. At a subsequent meeting of the society in November, 1818, Dr. Hale presented a letter from Dr. Lyman Spaulding, of New York, together with a circular letter from the corresponding committee, of New York, relative to a National Pharmacopeia, which was, on motion, approved.

"To beginnings like these we are indebted for our present U. S. Dispensatory. We can scarcely appreciate our obligations to these noble and thoughtful pioneers of medicine, laboring among poor backwoodsmen in a sparsely settled country on the verge of civilization.

"The proceedings of the First District Medical Society show an earnest and honest determination to protect the purity of the profession and the lives of the community by rejecting candidates unfitted or unprepared to practice medicine, and by pursuing legal means to suppress quackery. At the semi-annual meeting at Vincennes, May, 1819, two candidates were presented for examination and membership rejected. At this meeting, on motion, it was

"Resolved, That two delegates be chosen to meet in convention with delegates from the other district societies for the purpose of forming a State Medical Society, and to hold such correspondence with the members of the district board as they may think proper in order to form the said society. On counting the ballots it appeared that L. S. Shuler and Philip Barton were elected delegates.

"On motion,

"Resolved, That Elias McNamee, L. S. Shuler, Hiram Decker, Philip Barton and William Whittlesey be a committee to choose a delegate to meet in convention for the purpose of forming a District Pharmacopeia, and for a general corresponding committee.

"On motion,

Resolved, That the corresponding committee be instructed to accept (if in their opinion it should be expedient) the proposals of Dr. J. Smith, United States agent for vaccination, for establishing a National Vaccine Institution.

"On motion of Dr. Shuler, it was

Resolved, That the constitution be amended by the addition of the following article, 'No person shall be admitted to an examination before the medical censors without producing satisfactory evidence of having studied physic and surgery for the full term of three years.'

Resolved, That it shall be the duty of the secretary to pursue such measures as may be necessary to carry into effect the law regulating the practice of physic and present to the Grand Jury, or to the prosecuting attorney of each county in the district, all unlicensed practitioners of medicine.

"But few medical societies anywhere can show a reference to so many important matters as were acted upon at this meeting. This society was the 'Mecca' at whose shrine, in spring-time and in autumn, the professional pioneers of our state came from the hamlet, from the prairie, and from the shadowy and lonely forest, to offer their devotions to medicine and kindred sciences. The paths leading hither were untrodden. They were long and weary, but at the end their noble purposes were strengthened and their faith and knowledge renewed. I personally knew Dr. Joseph Hopkins, of Illinois, long an eminent and useful practitioner of medicine in that state, who was a member of this society and regularly attended its meetings, although to do so he had to ride 100 miles on horseback."

FALSE JOINT—BY DR. L. S. SHULER.*

"Jonathan Rathbone, aged 28 years, had his humerus fractured, near the middle, in February, 1822. Nine months afterward no union had taken place. His surgeon advised sawing off the ends of the fractured portions. I was called upon to perform the operation. The fracture was oblique, a sharp point of the lower portion projecting upward, near the biceps muscle, and apparently in contact with the integuments. The space between the broken ends was at least half an inch, filled with a fleshy or elastic substance. No exertions could extricate the oblique point from its position in the muscles or bring the bones in complete apposition. I advised the plan of Dr. Physick, and while passing the seton needle, to practice the suggestions of Charles

Bell, to cut and break the callus of the broken bones. A strong needle, nine inches long, its point for three inches shaped like a common lancet but not sharp, with an eye sufficiently large to admit a couple of skeins of silk (the space between the flattened part of the needle's eye was round), was used to perform the operation. An incision was made through the integuments with a scalpel immediately over the projecting point of bone; the needle was introduced, and was freely and forcibly pushed in different directions so as to completely disorganize the structure between and on the ends of the bones. The seton shortly produced a very free discharge, but the patient, receiving no benefit, withdrew it at the end of five months. Both the patient and the attending surgeon had reluctantly consented to the operation, consequently but little attention was paid to the arm. It had, during the larger part of the time that the seton remained, been suffered to swing, not being retained in its place as in case of recent fracture. Two months after removing the seton, the patient observed that the motion at the false joint was not as free and extensive as formerly, which induced him to retain the arm in its natural position by splints and bandages, and, in some seven or eight weeks after, a complete union was formed.

"This case, while it proves the value of the practice, which originated with our celebrated countryman, Dr. Physick, likewise furnishes us with reason to believe that the suggestions of Mr. Bell, to cut and penetrate the ends of the bones, may assist in performing a cure in cases where the seton alone would fail, and that in all cases it would hasten the process. Another fact of no less importance is that the continuance of the seton may succeed at a much greater length of time than has been usually practiced."

THE CENTRAL MEDICAL COLLEGE

Dr. Thad M. Stevens, who was formerly secretary of the State Board of Health, has contributed to the Transactions of the State Society, 1874, p. 17, historical matter of sufficient interest to be used in this paper. He says:

"In the fall of 1849 Central Medical College, located at Indianapolis, Ind., held its opening exercises. This school was a branch of the Asbury University, of Greencastle, Ind., the trustees of which acted in the same capacity to the college. The professors who were elected to the various chairs were: John S. Bobbs, Indianapolis, anatomy; Dr. Baker, Cincinnati, surgery; L. Dunalap, M.D., Indianapolis, theory and practice; Charles Powney, Greencastle, chemistry; James Harrison, Indianapolis, *materia medica* and therapeutics.

* Transactions of the Indiana State Medical Society, 1874, p. 57. Besides the historical interest of this case, it possesses a surgical significance of value. Dr. Read has mentioned several other interesting surgical operations performed by Dr. Shuler.

"In the summer of 1850 the Medical School of Laporte, Ind., having suspended, two who were engaged in teaching there were elected to chairs in the Indiana Central—Dr. Deming to the newly-formed chair of institutes of medicine and general pathology, and Dr. Meeker to fill the chair of anatomy, Professor Baker having resigned the chair of surgery, and Professor Bobbs having been elected thereto.

"The last sessions of this school were held in 1851-2, at which time, in the wisdom of the trustees of the parent institution, an attempt was made to reorganize according to some pet scheme, but the school was exploded and went to pieces. From that time until the fall of 1869 a hiatus existed, wherein were no medical schools, or, indeed, any institutions, even in a remote degree, connected with medicine.

"In the spring of 1869 the Academy of Medicine, through the influence and suggestions of a few, took steps to organize an independent medical school. A committee was appointed, who formed chairs and selected members to fill the same. The academy adopted the report of this committee.

"The following were the gentlemen selected to fill the various chairs: J. S. Bobbs, M.D., principles of surgery; J. A. Comingor, M.D., orthopedic surgery and surgical pathology; R. N. Todd, practice of medicine; T. B. Harvey, M.D., diseases of women and children; W. B. Fletcher, M.D., physiology; R. T. Brown, chemistry; Dougan Clark, M.D., *materia medica*; G. W. Mears, M.D., obstetrics; L. D. Waterman, M.D., anatomy.

"During this term the college met with a great loss in the death of Prof. J. S. Bobbs, M.D., who, without disparagement of any of his associates, it can be said, was the real originator and maintainer of the institution.

"The faculty was reorganized during the summer of 1870, J. A. Comingor taking the chair of surgeon, a consolidation of his former chair and that left vacant by the death of Dr. Bobbs, while a new chair of medical jurisprudence, toxicology and analytic chemistry was formed, with Thad. M. Stevens, M.D., as occupant.

"In 1871, by mutual agreement, the school became a branch of the State University, of Bloomington, having, however, the control of its internal affairs vested in its own faculty.

BOBBS' FREE DISPENSARY

"Up to 1870 there was nothing in the shape, or having a purpose similar to, a medical dispensary in Indianapolis, with exception of one

or two private establishments that took the name for the purpose of deception, and thereby making money, from which the circulars of impostors, lauding their nostrums, were issued. A gift to the poor of the city, from Dr. J. S. Bobbs, who died in the spring of 1869, was made the nucleus for the establishment of Bobbs' Free Dispensary, its board of directors to be the faculty of the medical college, having a superintendent, resident physician and druggist.

INDIANAPOLIS CITY HOSPITAL.

"As to hospitals, the city for a long time possessed nothing of the kind. Indeed, no attempts were made to establish one until 1858. At this time an attempt, successful in a small degree, was made by the late L. Dunlap, M.D., then a member of the City Council, to have the city build a City Hospital. A beginning was made, a small building finished, and then all dropped, stillborn. The wind soon whistled through the broken panes of glass, and the frost and rain in turn covered the floors. No sick ever knocked at the weather-beaten door for admittance, and, therefore, no provision was made for their reception. This continued until the war commenced. New life surged into the old walks; energy appeared where apathy reigned. The building was enclosed, equipped and filled with sick and wounded, and became one of the many hospital centers of the city. After the war had ceased and the military authorities were done with it, decay and silence again claimed it as their own; the roving swine and cattle passed to and fro through its dismantled gates, and it became an eyesore to the city. It was not until the demand of the physicians of the city arose to a clamor that the City Council promised to aid in furnishing and equipping it in the interest of the city's poor. This step was finally taken by them in 1867, since which time its wards have been filled by those deserving such attention.

"Bobbs' Medical Library was the result of a gift of \$5,000, bequeathed by the late Prof. J. S. Bobbs, M.D., to the Indiana Medical College, whose trustees relinquished their right to the same, and by mutual agreement with Mrs. J. S. Bobbs, the executrix of the doctor's estate, it was given to a board of directors who were to establish a library bearing the above title. Said board was composed as follows: G. W. Mears, M.D., T. B. Harvey, M.D., J. A. Comingor, M.D., Wm. B. Fletcher, M.D., Thad. M. Stevens, M.D., R. N. Todd, M.D., Simon Yandes, Esq.

"This board held its first meeting for the purpose of organization March, 1873, when the fol-

lowing officers were elected: G. W. Mears, M.D., president; T. B. Harvey, M.D., vice-president; J. A. Comingor, secretary; Thad. M. Stevens, M.D. librarian and treasurer.

MEDICAL SOCIETIES.

"In 1845 or 1846 the physicians of Indianapolis organized what was called the Marion County Medical Society, the first local medical organization had in this city. We do not know all the membership. Drs. Sanders, Mears, Bobbs, Jameson, Dunlap, Gall, Bullard, Parry, Gaston and Andrew Hunt were among the first; afterward Woodburn, Thompson, Funkhouser and others were added. Various physicians throughout the county of Marion also belonged. This society had for its officers Dr. Sanders, president; Dr. Bobbs and Dr. Hunt, secretary and assistant. Dr. Mears was the second president."

NOTE.—In the Transactions for 1874, Dr. Alfred Patton, of Vincennes, states that the first medical society organized in Vincennes was under a charter granted by the State Legislature in the year 1835, (see this journal January, 1909, page 3). In the same volume, page 52, Dr. Ezra Read, of Terre Haute, says this society was organized in 1817 (see this journal April, 1909, page 157). Dr. Patton later acknowledged that he was mistaken and admitted that Dr. Read was correct. See Transactions for 1875, page 82.—G. W. H. K.

(To be continued.)

PSILOSIS, OR TROPICAL SPRUE.

REPORT OF A CASE IN INDIANA.

ROBERT HESSLER, A.M., M.D.

LOGANSFORT, IND.

Some time ago I reported before the Cass County Medical Society the presence in our State of a case of psilosis or tropical sprue, also referred to in the Proceedings of the Indiana Academy of Science, 1906. The report was prefaced by remarks on the introduction of new diseases and their spread. A brief abstract of the paper may be of interest to the general practitioner.

Many diseases at first had a limited or local distribution, from whence they spread to other regions; some remain and become endemic, others flourish for a short time and then disappear; some may come in repeatedly. We see an analogy in the introduction of plants and animals, pests and parasites. In the days of the undisputed sway of the Indian there were few diseases in our State, and many of the now common weeds and insect pests were unknown. The coming of the white man was followed by the introduction of a host of weeds, blights, parasites and diseases, the latter gathered from all quarters of the globe. To-day the botanist is constantly finding new

weeds and the entomologist new insects, and occasionally a new disease is found by the physician.

The first appearance of a new disease, or rather of an old disease in a new community, is of interest to the student. The first case often escapes recognition, for no one may be on the lookout or take the trouble to study it, but after a case is reported others are on their guard. Thus, after the first cases of blastomycosis, general interest was aroused and soon many cases were reported. We see this again illustrated in the case of smallpox, which appears every now and then in the smaller cities; the first mild case may escape recognition, but the repeated occurrence of cases puts every one on the watch. The same is true of such diseases as Asiatic cholera and the bubonic plague in the United States; the presence of a single case to which the attention has been called warns physicians, and others cases are less likely to escape detection.

The appearance of some diseases is so marked or characteristic that they are promptly recognized; others come in so unobtrusively that many cases occur before the real nature is fully understood. Thus the appearance of smallpox in Indiana early in the eighteenth century was so marked that there was no mistaking the disease; likewise of Asiatic cholera early in the last century and of the repeated epidemics of influenza. But we do not know when the common diseases of childhood, which were so severe to the Indians, first came to our State: this is simply due to the failure of the early physicians to report their observations. Tuberculosis, on the other hand, came in so quietly that no one noted its first appearance, and its character is such that it is, or rather was, not a simple matter to recognize it among a rural people living more or less in isolation.

The introduction of specific diseases implies the introduction of the active causes. An affection may be simply the reaction of the body toward an unfavorable environment without any specific cause. Some diseases are classed as specific, although the active cause may be still unknown. As an example of each of these groups we need only think of tuberculosis and its specific organism; of neurasthenia and the conditions under which it occurs; of rheumatic fever, which seems to be due to a specific cause not yet identified. Tropical sprue or psilosis comes under this last head; the real cause is still unknown; the disease seems not to propagate itself outside of tropical or subtropical regions.

The case of psilosis which I saw was that of a young woman who had been a trained nurse and

became a medical missionary. While stationed in Korea in 1904 she became afflicted with a diarrheal affection, but which acted in a manner quite different from ordinary forms. Dr. Avison, of Seoul, himself a victim, diagnosed psilosis, and advised a milk diet, with rest in the country. Getting no better, the patient was transferred to Japan, and then sent back to the United States, and ultimately returned home to Indiana. The patient was related by kinship and marriage to several physicians, who advised and prescribed in turn, the writer among them. I made a study of the patient and the disease and finally advised removal to a different climate, with proper diet. The patient finally died, and no doubt the cause of death is given as psilosis or tropical sprue in the mortality statistics.

Since foreign travel is increasing, and especially since we have taken possession of far-away countries and are sending our young men as soldiers and teachers, we must be on the lookout for the introduction of diseases with which we are not familiar.

Manson, in his "Tropical Diseases," third edition, devotes over sixteen pages to the disease. Osler's text-book on medicine, sixth edition, gives what amounts to a brief abstract, which I will quote:

"Sprue or Psilosis.—A remarkable disease of the tropics, characterized by a peculiar, inflamed, superficially ulcerated, exceedingly sensitive condition of the mucous membrane of the tongue and mouth; great wasting and anemia; pale, copious and often loose, frequent and frothy fermenting stools; very generally by more or less diarrhea, and also by a marked tendency to relapse" (Manson).

"It is very prevalent in India, China and Java. Nothing definite is known as to its cause.

"When fully established, the chief symptoms are a disturbed condition of the bowels, pale, yeasty-looking stools, a raw, bare, sore condition of the tongue, mouth and gullet, sometimes with actual superficial ulceration. With these gastrointestinal symptoms there are associated anemia and general wasting. It is very chronic, with numerous relapses. There are no characteristic anatomic changes. There are usually ulcers in the colon, and the French think it is a form of dysentery.

"Manson recommends rest and a milk diet as curative in a large proportion of the cases. The monograph of Thin and the article by Manson in Allbutt's System give very full descriptions of the disease."

RESPONSIBILITY IN MENTAL DISEASE.

H. R. LOWDER, M.D.
BLOOMFIELD, IND.

Most authors who have studied the brain from a physiologic, pathologic and psychologic standpoint are agreed upon the proposition that mind is the product of brain action.

Hammond endorses this view, claiming that its admission, in a general way, among scientists, is so universal that its argument in his small work is unnecessary. The dualist, of course, demurs. He can not admit a proposition which knocks from under him the foundation of the doctrine which sustains his creed. Mind must be an entity with him, or his ancient theologic teachings and preconceived notions must come to naught. We do not wish to appear dogmatic, but it does seem that the monist is more in consonance with reason, that his contentions are more logical, and that he does not completely perch himself outside of the realms of knowledge. The belief that slugs and pieces of intelligence should be cut off the great mass of intelligence, somewhere kept in reservoir, and given to the individual to be used during his natural life, as taught by some psychologists, is too trivial to be listened to by the great majority of the present-day philosophers. It belongs in the crumbling ruins of theology, like the flood, the garden of Eden, and poor Eve's temptation. Since the day that the evil spirits were cast into the hogs which ran down into the sea and were drowned, there has been a great change in beliefs and opinions of the great thinkers of the world, and this change has not lightly been brought about.

Scenes of enormous bloodshed have marked the progress of reformation. The terrible crimes and inhuman cruelty that have been perpetrated in connection with the doctrines of witchcraft, evil spirits, the gods and the devils are revolting beyond degree to the humanities of civilized man.

I will not take time to run over the history of cruelty and barbarity with reference to the treatment of the insane from the time of the Christian era, I will say, down to the nineteenth century. It is well enough known. It was due to the universal ignorance of that disastrous period of man's history. It was criminal to think of or study about that which was endorsed by the priests or theological doctrinaires. Mind or spirit was an entity. It never became diseased except as it became possessed of a devil. The doctrine of duality was the great obstruction in the way of progress. But, as the mind of man burst its bonds and soared on high, to revel in

the sunlight of freedom, under the leadership of Gallileo, Kepler, Newton, Darwin, Spenceer, Haekel and dozens of other great searchers along the line of truth, the awful barbarities and the fiendish cruelties of these early days and the wickedness of the law and theology themselves began to be realized and looked upon with a sickening horror.

Maudsley says: "No one nowadays who is engaged in the treatment of the insane doubts that he has to do with a disordered bodily organ, the brain. Whatever opinion may be held concerning the essential nature of mind, and its independence of matter, it is admitted on all sides that its manifestations take place through the nervous system, and are effected by the central nervous parts which minister to them. If these are healthy, they are sound; if these are diseased, they are unsound. Insanity is, in fact, disorder of the brain, producing disorder of mind; or, to define its nature in greater detail, it is disorder of the supreme nervous centers of the brain—the special order of mind, producing derangement of thought, feeling and action, together or separately, of such a degree or kind as to incapacitate the individual for the relations of life." This includes epilepsy, imbecility, idiocy, dementia, cretinism and delirium.

William A. Hammond defines insanity as a symptom of disease of the brain, characterized by a partial or complete derangement of one or more of the faculties of the mind, in which, while consciousness is not abolished, mental freedom is altered, weakened or destroyed. The faculties of the mind he names as intelligence, will, emotion and perception. This seems to be objectional, as it might include cases of idiocy or dementia in their incipiency and exclude them in their final state. He classes that form of insanity which affects the intelligence only as intellectual insanity, and it is chiefly characterized by delusions. Maudsley says, however, that delusions are not in every case an evidence of insanity. This conflict of authority results not in a different appreciation of facts, but in a different meaning attached to the term. Hammond says a delusion is a false belief with reference to a fact, and must be tenaciously held by the insane person in spite of such reason as would convince him in his normal mental condition. For instance, a person believes his arm is glass and carries it in a sling, and takes great care it is not broken. You argue with him, calling his attention to the pliancy of the skin, the softness of the muscles and other physical conditions. He admits your contention by saying, "Yes, I know it looks that way, but the substance is glass." In some in-

sances Maudsley attaches to the term the more common and untechnical signification. Continuing Hammond's classification, he designates weakness or disturbance of will power volitional insanity. Maudsley would designate some of the cases that involve the feelings chiefly, emotional insanity, and includes under it mania without delusions and simple melancholia. Hammond's mania includes those cases in which two or more of the elements of the mind are affected at the same time. Maudsley includes in his classification idiocy, imbecility and dementia. The first is a weakened state, more or less, of all the mental faculties, and is congenital; the second is the same condition, resulting from a lack of development, and dementia is the same as idiocy, but is acquired.

There are many definitions and classifications of insanity, all of which in a greater or less degree are objectionable, so that each individual case must be considered from its own standpoint. The mental processes must be taken into consideration, and observations made as to their departure from the normal, together with such physical signs and conditions as may be found to exist in disease of the brain. So reason, thought, memory, imagination, will, feeling and perception are all functions of the brain, the result of nerve-cell action. Let disease attack this great center of the nervous system; let the cell action be perturbed, or the forces that the cells generate and set loose vary from the normal, and any or all these mental faculties may become deranged, producing the vast variety of signs and symptoms of mental alienation.

The brain is the center of the moving force, under the guidance of the will, the intelligence, the feelings, the judgment and reason. If it become diseased, any or all these may run riot. The machinery that puts the individual in harmony with the outer world is all broken down. The normal causes of cell action are all changed. The nervous cells are acted upon by different and unusual forces, with what astounding, unexpected and bewildering results! Long-time companions and friends meet, and one strikes the other dead. A man is seen walking a high bridge across a stream; suddenly he plunges headlong overboard to the depths below and is drowned. There is a family of three, four or five, in which peace, love and affection abound. Unusual quiet and stillness is observed to exist in that once happy home. The lock is broken, the door is forced open, and all are found dead, from the sweet infant just learning to babble and totter across the floor, to the mother who bore them and the sire who should protect and defend

them. The demon, insanity, the offspring of a diseased brain, had seized the unfortunate bread-winner, and in his frenzy he had slaughtered his most loved ones and himself. An honorable, upright, kind, humane man, or a lovely Christian woman, whose whole life has been devoted to doing good, is seized with a sudden impulse to kill some one. It may be his or her best friend. These people recognize the enormity of the offense they feel impelled to commit, knowing that the act is wrong and unlawful, present themselves with tears and pleading to be incarcerated, restrained or watched. Horror fills their every fiber! They understand their relation to the deed in its every aspect. Their prayers may be answered, and recovery take place. The brain resumes its equilibrium, and serenity and happiness return to these unfortunate people. At another time this awful impulse may take hold of these people again. The malady is lurking unseen and unobserved. But this time no restraining force is near and the deed is committed. Such horrible acts as these are the most cruel and deplorable consequences of insanity.

All civilized countries and nations recognize the irresponsibility of the insane in committing criminal acts.

In Indiana, if it is proved to the satisfaction of the jury that the accused is of unsound mind at the time of committing the act, it is their duty to acquit him; as to what constitutes insanity are questions of fact, to be determined by the jury under the evidence. It is for medical authority and medical expert witnesses to show the jury the symptoms, conditions and facts of insanity, and then it is left for them to believe the witnesses or not. The law in this state is just, humane and proper. No fault can be laid at the door of the court, if the jury is honest, conscientious and sufficiently intelligent to understand the facts and the law. Then, gentlemen, it is up to us. Then let us come to the task with a clear conscience, steeped in justice, and so trained that we may expel from the juror's mind the clouds of obscurity, illuminating the facts so that they may be readily seen and comprehended.

Then what is the matter? The chief trouble is with the medical witness and the medical profession. The whole farcical play is founded on the ignorance, and, I am sorry to say, in a few instances the morality of the medical expert. Recently we have seen our profession disgraced in a few great criminal trials in which it was apparent that money had bought two or three doctors, soul and body. It is lamentable that such a thing should happen. Not that the physi-

cian is worse than any other class of people; in fact, he is not so bad; but he is more highly educated than the great majority and must be held to a stricter account and placed on a higher plane of morality.

One great trouble is the difficulty in the diagnosis of some cases of insanity. The patient in certain cases of monomania soon finds that it is his delusion that gets him into trouble, and with consummate skill and shrewdness he soon acquires the ability to conceal his mental defect. Thus the examiner may be balked in his efforts to solve the mystery of his patient's condition.

Says Maudsley: "It should be borne in mind that insanity is a disease which, even in its acute forms, has a much longer course than ordinary bodily diseases have; while in them we count duration by hours and days, in it we count rather by weeks and months. As a rule, certainly, a person does not go mad in a few hours or days. On the contrary, he may take several weeks or months before he is clearly deranged. Now, if while he is in this early stage of his disease he do some act which brings the question of the state of his mind into a civil or criminal court, there may be much dispute concerning it. Lawyers, maintaining that he knew quite well what he was doing, will assert his entire responsibility; the physician, recognizing the first symptoms of approaching derangement, familiar by experience with its occasional sudden exacerbations and its reasoning unreason, and knowing how little power of control there may be over the suddenly arising morbid idea or impulses, may probably uphold his irresponsibility. The one looks to the act itself, and to the evidence of consciousness in its execution, deriving its motive from the experience of the workings of a sane mind and inferring malice a forethought; the other looks to the antecedent symptoms of disease, and to the loss of power of will which may be occasioned, thereby deriving his interpretation of the act from his experience of the workings of an unsound mind.

Doubtful cases, difficult of decision, can not fail to occur from time to time; cases which the physician, when he is obliged to give a name to them, is driven to call examples of partial insanity, moral insanity, homicidal mania, kleptomania and the like; whereupon his testimony is subject to the retort that such kind of mania will be best treated by legal punishment—by the prison or the scaffold. The retort may be effectual for the moment, but it is neither humane nor just. If the person be suffering from disease which lessens or destroys his power of self-control, it is manifestly unjust to treat him as if he were free from disease and

were a completely responsible agent. So far as he is concerned he has surely the right to claim the privilege of his disease and the compassion which attaches to affliction in civilized lands."

Shakespeare, notwithstanding the antiquity of his day, had a humane view with reference to the acts of the insane, as is shown when he makes Hamlet say:

Was't Hamlet wrong'd Laertes? Never, Hamlet,
If Hamlet from himself be ta'en away,
And when he's not himself does wrong Laertes,
Then Hamlet does it not, Hamlet denies it.
Who does it then? His madness; if it be so,
Hamlet is of the faction that is wronged;
His madness is poor Hamlet's enemy.

There is no justice in punishing the partially insane, the monomaniac and those with a lucid interval, and the unfortunate chronic insane, if the wholly insane goes free. For if one part of the brain is diseased, none of it can be wholly sound. If the patient have pneumonia, the whole body becomes more or less affected; the fever rises, the nerves are poisoned, the brain loses its function, and he raves in the madness of delirium. If a part of the brain that functionates a certain element of the mind should become diseased, certainly it would not be unreasonable to conclude that the other centers are weakened. The parts are in such close relation that the disease spreads by contiguity and continuity of structure. Listen to what Maudsley says on this point. After speaking of chorea as "insanity of the muscles" and its close relation to epilepsy or insanity, he says: "In like manner insanity might truly be described as a chorea or convulsive disease of the mind, the derangement being in nerve centers whose functions are not motor, but mental, and whose derangements, therefore, display themselves in convulsions not of muscles, but of mind. Hence it is that instances occasionally present themselves in which the disorder is transferred suddenly from one set of nerve centers to another, the old symptoms ceasing, and quite a new order of symptoms supervening. Thus a severe neuralgia disappears, and the patient is attacked with some form of madness, the morbid condition of perverted function having been transferred from the sensory centers to the mind centers; when the madness has passed away the neuralgia may return. Again, convulsions cease and insanity occurs, the transference being from the motor centers to the mind centers; or, conversely, the appearance of convulsions may be the termination of an attack of insanity. Instances like these indicate that the kind of morbid change which is the physical condition of deranged

function in the sensory and motor nerve centers is similar to that which is the condition of morbid function in the mind centers; however that may be, they certainly warrant the conclusion that disease of mind is a derangement which is nowise metaphysical, but one strictly comparable with such other nervous disorders as neuralgia and convulsions. If we once for all clearly realize this just pathological conception of the entire mental derangement, it will deliver us from a multitude of vain speculations, and we shall find it essentially useful in our endeavors to arrive at a correct opinion with regard to the responsibility of insane persons."

Again, heredity is a fundamental principle of biology. A pioneer observer in this branch of science wrote a long time ago: "And God said let the earth bring forth the grass, the herb yield seed and the fruit tree yielding fruit after his kind, whose seed is in itself upon the earth." There is a time in the history of every individual animal in which it can not be distinguished from any other individual in any order, family or species. The beginning fecundated cells are all alike in appearances. As development proceeds each individual soon begins to show its species, and over the forces that mature it, it has no control. Why an acorn grows to be an oak tree we do not know, and we can not comprehend the power that places each cell in its proper place in the completed structure. The last generation resembles the parents, and, in some particulars, it may be, the grandparents, or the still more remote ancestry under the same law. The physical composition and structure of the brain, as well as those of the other parts of the body, are inherited. Perfections, defects and imperfections of ancestors are found the same in posterity. Insanity is the most commonly inherited of all diseased conditions and predispositions: and certainly it is not just to hold the individual responsible for defects and imperfections of his relatives that lived before him.

It is the province of the physicians to settle this great question. They always have led and must still lead in fixing the status of the insane in regard to their responsibility in crime. The courts always have been unstable in regard to it and floundering in uncertainty. At least in this state and several others they have thrown the whole responsibility upon the medical profession. It appeals to our learning and conscience. Shall we swear away the life of an individual whose normal mental state is destroyed by disease of the brain; or, by our evidence, foist upon society the criminal who seeks to gain his freedom by the insane dodge? Let us be sure we

stand by the truth. Let us hew to the line, no matter where the chips may fall. Let us refuse to testify in these cases unless we feel certain that we are competent. If we are taken into court contrary to our will, let us refuse to answer questions that we do not understand. A display of honest ignorance is more commendable than an attempt to wade in water of unknown depth.

ETIOLOGY AND TREATMENT OF HEMORRHOIDS,

WITH ESPECIAL REFERENCE TO OPERATION BY THE LIGATURE METHOD UNDER LOCAL ANESTHESIA.

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In presenting this additional chapter on "The Etiology and Treatment of Hemorrhoids," I wish to impress upon the profession the more recent and simpler methods in the surgical technic and care of this disease. Hemorrhoids is one of the oldest diseases, and more universal than any other. The advances in the care of this trouble have kept pace with the other branches of medicine and surgery. A thorough knowledge of the anatomy and physiology of the rectum will enable one to understand why hemorrhoids should occur so frequently and under so many different conditions. A pile tumor at first is only the dilatation of one of the venous pools at the point of anastomosis of the superior and middle hemorrhoidal veins. Later, as the tumor gradually enlarges, connective tissue begins to form around the vein, converting it into a mixed tumor. As this degenerative change increases, the conformation of one or more tumors becomes evident. In some cases the proliferation of connective tissue is so great that the veins have been merely obliterated, the larger part of the hemorrhoid being fibrous tissue.

Etiology.—From all that has been written about this disease it is a curious fact that no definite cause has been given as producing this trouble. The causes are both predisposing and exciting. Among the predisposing causes may be mentioned age, more cases occurring in middle life, during the period of greatest activity, and is more frequently found in men, due to the greater physical strain, habits and indulgence; those leading sedentary lives and those who do heavy lifting are more commonly afflicted.

Environment.—Hemorrhoids are more common in the higher classes, caused principally by indulgence in high living, luxury and excessive stimulation.

Heredity.—"That heredity predisposes to hemorrhoids is a fact without a doubt" (Bodenhamer). It is more likely, however, that the heredity comes from the predisposing influences than from anything else; otherwise children would be more often affected. Climate and seasons have little influence, although some authorities claim hemorrhoids are more common in the tropics and in the spring and fall.

Anatomical Causes.—One of the chief causes. Hemorrhoids is a disease peculiar to man, principally due to his erect posture, the lack of valves in the portal circulation, and to the peculiar arrangement of the superior hemorrhoidal veins, running longitudinally about three inches along the rectum before passing through the muscular coats at right angle to the gut. "This button-hole manner of exit through the gut wall is a means of stasis" (Verneil).

Exciting Causes.—Anything which produces a stasis of the hemorrhoidal circulation, or causes straining, may result in a varicose condition of the veins and venous pools at the lower part of the rectum. One of the most universal of these causes is constipation and the straining attending this disease, together with diseases of the prostate, bladder, urethra, pelvic diseases and abdominal and pelvic tumors. And not infrequently uterine displacements, obstructive hepatic disease and disease of the heart and kidneys, pregnancy, diarrhea and tight lacing play a rôle in causing this trouble.

The injudicious use of drastic purgatives and enemata tend to cause hemorrhoids, owing to the straining and irritation produced by them. The causes of hemorrhoids with regard to their importance is posture, constipation, diet, muscular strain, diseases of the liver, genitourinary and urinary diseases.

Classification.—Since the time of Hippocrates piles have been divided into two general classes according to their location, the external and internal variety. External piles are those that are visible and covered with skin. They may be divided into thrombotic, varicose, connective tissue tabs, and inflammatory. Internal piles, those lying above the mucocutaneous line, are divided into thrombotic, venous, capillary and mixed. Internal piles originate from the radicles of the superior hemorrhoidal vein, while the external variety come from the inferior hemorrhoidal vein. Hemorrhoids do not originate from the

middle hemorrhoidal veins. When the sphincters become relaxed from any cause, the anastomosis between the superior and inferior vessels becomes established, and may cause a third variety called mixed hemorrhoids.

Symptoms.—The symptoms of hemorrhoids vary greatly in different subjects. While some extensive cases give little annoyance, others of less consequence cause a great deal of pain and mental distress. The external thrombotic hemorrhoids are small oval tumors, varying in size from a pea to a walnut, and situated just beneath the skin of mucocutaneous surface. They are usually found in the robust subject, and come on suddenly with a sharp, cutting pain during the time of straining or violent exertion. They are produced by the clotting of blood in a varicose vein, or by the rupture of a vessel and extravasation of blood into the cellular tissue. The tumor gradually increases in size for the first few hours, causing the patient great pain, with inability to sit. The pain may be reflected to the sacrum or down the thighs, and, owing to the spasm of the sphincters, the bowels move with great difficulty. If left alone, these hemorrhoids may take one of three courses: they may be absorbed, may become organized and remain as an encysted tumor, or they may become infected, resulting in an abscess or fistula.

The connective-tissue type, or skin tabs, consists in a hypertrophy of the mucocutaneous tissue about the margin of the anus. When not inflamed, they appear as flat folds, more or less numerous. They originate usually from some inflammatory disease or irritating discharge of the anus or rectum, which causes a congestion of these parts, with the subsequent hypertrophy. This variety of hemorrhoids is prone to inflammatory attacks, which may be brought on by rough detergent material, by dissipation in eating or drinking, by diarrhea or constipation, by chafing of the clothing, or by abnormal discharges. Unless inflamed, they cause little trouble, except annoyance in keeping the parts clean.

The external varicose hemorrhoids seldom cause trouble, and are only an exaggeration of the normal varicose state which occurs at each bowel movement. Inflammatory external hemorrhoids are usually secondary to one of the other varieties, or originate from some traumatism or irritation around the anus.

Internal hemorrhoids are more frequent and more serious than the external type. The two most important symptoms of internal hemorrhoids are pain and hemorrhage. The bleeding is usually venous in character and occurs dur-

ing defecation. It may continue for some time afterward, and occasionally become so profuse as to cause the patient to faint from the loss of blood. Marked anemia from the loss of blood is not infrequent. While a great many different types have been described by different authors, only the four will be mentioned in this article which have been previously named—the thrombotic, capillary, venous and mixed.

The thrombotic internal hemorrhoid consists of an extravasation of blood in the submucous tissue, and differs from the external type only in location and the tissue involved. They are less painful and less frequent than the external variety, and rarely demand any attention, except palliation.

The capillary form consists of a small raspberry development of the arterial capillaries close to the surface of the rectal mucosa and only receives a covering of a very thin layer of epithelium, which is easily ruptured, causing frequent hemorrhages. They do not protrude, and can be diagnosed only by the aid of the speculum, unless the sphincters are relaxed, when it is possible to evert the mucous membrane sufficiently for them to be observed. They bleed easily, the blood being arterial in character, oozing freely after each evacuation. The amount of blood at any one time is not great, but the continued loss often causes marked anemia.

The varicose or venous variety is the most frequent type of internal hemorrhoids, and originates in the venous pools at the connection of the arterial and venous circulation. In the beginning they consist simply of a congestion of the vessels, but in time the hyperemia and dilatation which are produced by the straining, the passing of hard fecal masses and the long sitting at stool cause an increase of connective tissue and eventually a tumor formation.

The mixed hemorrhoids are found where the sphincter muscles have become relaxed and an anastomosis is established between the superior and inferior hemorrhoidal vessels. They are covered by both skin and mucous membrane.

In the first stages of hemorrhoid formation no symptoms are noticed, with the possible exception of bleeding at stool and an uneasy sensation at times in the anal and sacral regions. As the pile tumors enlarge, they will be noticed to protrude during defecation, but will recede spontaneously after taking the erect or reclining position. As they prolapse and grow larger the grasp of the sphincters hinders their return, they become edematous and painful, and the patient finds it necessary to return them by pres-

sure; failure to reduce them often results in strangulation.

Pain is usually reflex in character, and referred to the lumbar or sacral regions, except when the hemorrhoids are acutely inflamed; then a throbbing, burning pain will be localized at the anus. Gastrointestinal symptoms are often present and quite frequently become very distressing.

Mucus is nearly always found much in excess of the normal secretion. When in great amount, some authorities have given this condition the name of "white hemorrhoids." This discharge of mucus gives great annoyance to the patient by the constant soiling of the clothing, and in some cases the perineal tissues become greatly irritated by the constant discharge. Kelsey describes as one of the symptoms of hemorrhoids a condition which he terms "rectophobia." He says: "There is hardly any variety of pain or of functional nervous disease that I have not cured by the simple removal of hemorrhoids, and this applies as often to men as to women."

Treatment.—The treatment of hemorrhoids is divided into two classes—the palliative and radical. Palliative treatment in those conditions which may be radically cured by operation without subjecting the patient to pain or by giving general anesthesia is not considered conservative treatment to-day. In many cases, however, the palliative treatment is the only one to consider when the case is complicated by disease or circumstances. While the great majority of hemorrhoids treated by the palliative treatment recur sooner or later, there are many cases which receive relief for years. The fact that the large proportion of patients suffering from rectal diseases are treated by irregular practitioners is due largely to the inability of the general surgeon to offer relief, except by giving a general anesthetic.

The palliative treatment of hemorrhoids in the incipient stage is often successful. The cause should be sought for and removed. Any obstruction to the portal circulation should be remedied, and the diet regulated in quantity and quality, the use of condiments and stimulants prohibited, and the ingestion of carbohydrates restricted. The bowels should be regulated, and any urethral, prostatic and vesical irritation relieved. Regularity of the habits and mode of living, with a moderate amount of exercise in the open air, should be the daily routine. When hemorrhage is present, the patient is most always apprehensive and seeks relief. The flow is rarely difficult to check; the horizontal position, cold

applications with astringent injections of tannic acid or hydrastis and pressure upon the anus will stop the bleeding. Where the piles prolapse, they should be replaced gently, steady pressure and some astringent ointment applied. Cold-water injections will often be found very gratifying.

It is not infrequently the case that the piles are acutely inflamed, and the treatment in this condition would be antiphlogistic, provided operative treatment, which is the surest and quickest way to obtain relief, is refused. Lying with the hips elevated and an ice bag applied to the parts often gives quick relief. If the cold does not relieve, a 25 per cent. solution of boroglyceride may be applied on some soft cloth and a hot-water bag placed over this. It is often necessary when the pain is severe to give an opiate. I prefer giving this in the form of suppositories, to which may be added 5 grains of suprarenal extract to each suppository where hemorrhage is present. Applications containing hyoscyamus, belladonna or iodoform, with the cautious addition of cocaine, often give the desired relief. In the majority of cases, however, an operation will eventually become necessary.

Operative Treatment.—The operative treatment of hemorrhoids is the more satisfactory to both the physician and the patient, since the introduction of infiltration anesthesia in the treatment of rectal diseases. It has been abundantly demonstrated during the last few years that nearly all those cases afflicted with hemorrhoids can be safely and radically relieved by simpler methods, provided the operator is one who has had the patience to thoroughly master the principles of infiltration anesthesia and to familiarize himself with the many difficulties encountered in applying these principles to this operation. This method had been practiced extensively previous to the publishing of a series of cases by Dr. S. E. Gant in 1903, but it was left to him to bring before the profession the thoroughness of the operation and the simplicity with which it could be performed in these cases when once the technic had been mastered.

In presenting this paper I do not wish to minimize the importance of general anesthesia, which is absolutely essential in many cases where complications exist, nor is it the intention to advocate infiltration anesthesia to the exclusion of many well-known operations which are eminently successful so far as radical cure is concerned. Granting that all the operative measures, such as the clamp and cautery, the Whitehead operation, the crushing method, and the many modifi-

cations of the ligature method are finally successful, the advantages gained by these operations are counterbalanced by the fact that it is practically impossible to perform any of them without first subjecting the patient to a general anesthetic.

It has formerly been the practice among general surgeons to require their patients to give up their social and business engagements and to take a general anesthetic for the removal of hemorrhoids, thus subjecting their patients to the additional danger of the anesthetic, besides confining them to bed for ten to twenty days. In most uncomplicated cases this is unnecessary, for they are operable under local anesthesia, which gives very little pain and discomfort and a very short interruption from the daily business of the patient.

The recent improvement in administering ether and chloroform greatly lessens the objectionable features connected with general anesthesia, yet there are many patients who consider all operations under general anesthesia as major procedures, and I would be safe in saying that not over 25 per cent. of the cases seen at my office would submit to an operation were it necessary to give a general anesthetic, even though they were suffering the most distressing symptoms.

An operation for hemorrhoids, unless it is rendered practically painless, had better be performed under general anesthesia. To be successful in the removal of hemorrhoids under infiltration anesthesia, a certain amount of dexterity and careful attention to the details of producing local anesthesia will be as necessary as when operating in other cavities of the body.

A careful preliminary examination is very important to determine the location and size of the tumors to be removed, as well as to ascertain whether any complications exist, such as fistula, fissure, ulcer, etc.; where serious complications exist it is often advisable to resort to general anesthesia. A certain amount of preparation is also essential. On the day prior to the operation a laxative should be given and the bowels thoroughly moved, followed by a simple enema. On the morning of the operation a second enema of a boric-acid solution should be given, and an hour before operation give a third, consisting of ten ounces of water and glycerin, equal parts. This will cause a certain amount of tenesmus and a congestion of the pile tumors. If the sphincter muscle is found to be spasmoidic and hypertrophied, thus interfering with the hem-

orrhoids being readily prolapsed, the removal may still be performed by making use of the suggestion of James P. Tuttle, of New York. Tuttle has demonstrated that by injecting a 2 per cent. solution of cocaine into the sphincter muscle at the distribution of the lesser sphincteric nerve dilatation of the sphincter can be performed with practically no pain. The injection is made by one puncture of the needle, starting in the posterior commissure about an inch from the anus, then with the finger in the anus to guide the needle a few drops are deposited on one side, and without removing the needle it is partially withdrawn and inserted into the opposite side, thus effectually anesthetizing the muscle. The divulsion of the sphincters is carried out in very much the same way as with general anesthesia, and the degree of dilatation with the small amount of pain connected with the procedure is quite a surprise to one who witnesses it for the first time.

With the hemorrhoids in view, they are now anesthetized by injecting into the center of the pile tumor one-eighth of 1 per cent. solution of cocaine until the tumor turns glassy white, when anesthesia will be found to be perfect. At first a slight amount of pain may be complained of from the distention of the tissues, but this will pass away as soon as the base is incised and the tension relieved.

The tumor is now grasped by a pile forceps and gently drawn down, while a U-shaped incision is made at the mucocutaneous border and dissected upward until the tumor is attached by a small pedicle which contains the main blood vessels. With proper care being taken in making the dissection, there will be very little danger of hemorrhage, as the main vessels lie very superficially beneath the mucous membrane and run longitudinally to the gut. A ligature of silk or linen is now thrown around the pedicle and securely tied and the hemorrhoid excised, care being taken to leave sufficient stump to prevent the slipping of the ligature. This method should be repeated with each hemorrhoid until they are all removed. After the internal hemorrhoids have all been removed, any external skin tabs that might be present should receive attention. These tabs are very annoying and are often the source of inflammation, owing to the constant irritation from clothing and the increased amount of attention required to keep the parts cleanly. They are often the source of pruritis ani, which becomes very embarrassing to the patient, besides the annoyance connected

with such a condition. Their size and location should be made out before beginning the operation, because the dilatation of the sphincters and the manipulation incident to the removal of the internal piles will make it difficult to locate them and to know how much tissue to remove.

They are removed easily and painlessly under local infiltration by the injection of one-eighth of 1 per cent. solution of cocaine and snipping off with a pair of curved scissors and being allowed to granulate.

After-treatment.—The after-treatment of these cases should receive very careful attention. The bowels should be moved on the second day and every day thereafter. My custom is to give a saline before breakfast on the second morning, and when the patient feels a desire to evacuate the bowels an enema of eight ounces of olive oil is given to facilitate the movement and to assist in relieving the pain which necessarily accompanies it. After the movement, the parts are thoroughly cleaned, and an ounce of sweet almond oil and iodoform (1 dram to 6 ounces) is injected into the rectum and allowed to remain. This is repeated daily for several days, when the enema is stopped and cascara is substituted for the saline.

The anal region should be kept clean by frequent washings, and an anal pad of sterilized gauze be worn as long as there is any secretion. The granulating surface should be cleansed daily and a stimulating application of ichthylol, 15 per cent., in castor oil or 4 per cent. silver nitrate solution be made to the anal canal as soon as the ligatures come away, and continued until the granulating surfaces have healed.

In conclusion, I wish to emphasize the great advantages which are to be gained in the majority of cases suffering with uncomplicated hemorrhoids by the use of the infiltration method. The operation is radical and equally as satisfactory without the use of general anesthesia. It reclaims a great number of cases that would otherwise drift to the charlatan. The patient suffers no pain during the removal, and the postoperative pain is no greater than under other methods. Many patients are permanently relieved of their suffering who would otherwise stand the pain rather than submit to a general anesthetic. The period of detention from business is greatly reduced, and often patients are able to go about their usual occupation, not finding it necessary to remain in bed.

SPECIAL ARTICLE

PSYCHOTHERAPY.

An examination of the files of *The Journal of the American Medical Association* reveals the fact that no articles on this subject appeared in this journal prior to 1908. During the few years preceding this date, references are found and a few abstracts under the head of current literature, taken chiefly from foreign journals which for several years had chronicled the successes of our foreign brethren in this field.

Even in 1908 there is no unanimity of opinion as to the merit of the subject under consideration. Some report that they are using psychotherapeutic measures with advantage. Others fear for the prestige of the rest treatment on the introduction of psychotherapy. Still others see in it a field for the quack such as he has never before dreamed of, and look with unfeigned alarm on the entrance of the clergy into the field of therapy and anticipate the appearance of hundreds of ministers in the roll of therapists to the untold harm of the laity. The fear of such a movement has been shared even by some ministers, as evidenced by the article in *The Congregationalist* of Feb. 13, 1909, on "The Practice of Medicine by the Unfit."

The slowness of the medical profession in America to take up a movement which has found so many able champions abroad has been due very largely to the decided streak of yellow found in it here in America. A play upon the credulity of people, not by any means in all cases the ignorant, has long been one of the chief stocks in trade of the quack. "Bottled psychotherapy," to use Dr. Sollmann's term, is to be found on the shelves of nearly every drug store of the country. Christian Scientists have long claimed marvelous cures, irrespective of diagnosis. Faith healers were found in every state. The Emmanuel movement, though differing fundamentally from the work of the Christian Scientists and faith healers, was placed by many in the same class and looked upon as a new menace. Many physicians found it difficult to look upon psychotherapy without having their whole field of vision taken up by the streak of yellow of the Faith Healers, Christian Scientists. New Thought people and the thousand and one other sects which have in common a disregard of medical science and of the accumulated knowledge of the ages. As a result a long time elapsed without any deliberate and consistent attempt to

find out the truth behind all these fallacies and apply this truth in a scientific way.

It was not until the translation, in 1905, of Dubois' epoch-making book that the attention of the medical men of America was called to a scientific mind cure.

In October, 1906, Dr. Barker, of Baltimore, in the *American Journal of Medical Sciences*, Philadelphia, made a report of a year's work, in which in more than 80 cases psychotherapeutic measures had been the mainstay. In Boston Drs. Cabot, Putnam and Prince have been active in investigating the possibilities and application of this adjunct to physical therapy. Dr. Weir Mitchell of Philadelphia, Dr. Hinkle of New York, Dr. Peterson of Columbia University, Dr. Coriat of Boston, Dr. Bliss of St. Louis, and a host of others have been using psychotherapy in their practice with success.

Psychotherapy, or mind cure, has been defined by Cabot as the attempt to help the sick by mental, moral and spiritual methods. As to the use and abuse of psychotherapy, the following brief outline of a course of lectures delivered by Professor Cabot at Harvard in February must serve the purpose of this paper.

1. Suggestion is properly used when it is clearly subordinated to education. It should be withheld so far as possible from "over suggestive" people.

Suggestion is abused when it is employed to deceive the patient; when it is given in large doses to those already deficient in initiative and independence, and when it is given by those not fully aware of its dangers.

2. Rest is well used for the repayment of physical debts, but it does not prevent our running in debt again. To be of permanent value it must be supplemented by re-education and work.

Rest is abused when it has the effect of sitting on the safety-valve; i. e., when more adequate expression in action is the patient's greatest need or when the rest concentrates the patient's attention upon himself.

3. All forms of psychotherapy, including the most valuable types—re-education and work—are abused:

(a) When they lead us to forget or to disparage past experience as embodied in the sciences of physics, chemistry, physiology, hygiene and in the art of education (social, moral and religious, as well as academic).

(b) When their use is based on false diagnosis (physical or psychical).

(c) When practiced by those who allow themselves to be overwhelmed by the number of their patients.

(d) When practiced by any one who considers himself competent to treat all his patients' ailments, whether of mind, body or estate.

(e) When so practiced as to give the impression that health is the chief end of life.

The great majority of physicians have used and are using psychotherapy, but, for the most part, in an unconscious or haphazard way. In it we, no doubt, have an explanation of why some men with comparatively little scientific basis for their practice have been very successful practitioners, and why others with an undoubted scientific standing have been only moderately successful in practice.

Just as psychotherapy may be a great factor in the success of the physician, it may be equally important as affecting the improvement or lack of improvement of the patient. Dubois cites the case of "a girl, 14 years old, who, at 10 years of age, had received from a baby a blow with a drumstick on the left shoulder. There had been a sharp pain in consequence, but there was no lesion at all. The cure would have taken place in a few hours if the physician had known how to calm the little girl. But he stated before the patient, 'This is serious, very serious! It is traumatic neuritis. I would much rather that the patient had broken both her arms!' The nervous pains lasted four years; the pain extended to the back and to the right arm, without any sensory or motor paralysis or atrophy occurring to confirm the existence of neuritis. Here is a disease created out of whole cloth by the physician."

It is evidently, then, of the greatest importance both to the physician and the patient that a scientific basis for psychotherapy should be secured by those who expect to enter on the practice of medicine. To this end the Cornell University Medical College has gone farthest in actually applying psychotherapy by the establishment of the first psychotherapeutic clinic under the auspices of a medical college. A course in psychopathology, or mental disease, has been established at Tufts College Medical School. A chair of psychology and medicine has been established at the University of Wisconsin. The University of Pennsylvania will soon have a course similar to that of Wisconsin, and has now arranged for several lectures on psychotherapy in the course of instruction in neurology. Drs. Cabot and Knapp gave a course of public lec-

tures on psychotherapy at Harvard University this winter. The principles of psychotherapy are fully recognized in the medical instruction at Yale University.

A course in psychology and psychotherapy has been arranged for the senior class of the Indiana University School of Medicine. The course will include several lectures on psychology introductory to the lectures on psychotherapy.

The course does not aim to make of this class finished psychotherapeutists, just as no medical course fits a man without further hospital work for the practice of major surgery. But, just as every medical school should send out trained men in surgical diagnosis who after making a diagnosis refer the case to the specialist for operation, so the aim of this course is to acquaint the men with the possibilities of psychotherapeutic measures and the class of cases in which they are of use, to show them what they themselves may do in this field and make them students of psychotherapy, leaving them to refer difficult cases to the specialist.

The specialist, Dr. Barker says, should be an honest man and an expert clinician. He should recognize the horrible reality of the misery of psychoneurotics. He may be more successful in understanding and treating his patients if he has had himself at least some little experience with the fatigues and fears of neurasthenia, provided he has made a good recovery. He must be interested in functional disturbances and not simply in anatomic lesions, and he must understand that hysteria and psychasthenia are as much diseases as are pneumonia and gonorrhea and often incapacitate the sufferer for a much longer period of time. He should be skilled in the refinements of diagnosis and should exhaust them in the study of his case before beginning treatment.

For those who are interested in the subject of psychotherapy I wish to give the following references:

"Hygiene of the Nerves and Mind in Health and Disease," by August Forel, M.D., translated from the German by Herbert A. Aiken, 1907.

"The Psychic Treatment of Nervous Disorders," by Paul Dubois, translated and edited by Jelliffe and White.

"Psychology," vol. i. by William James.

"Outlines of Psychology," by Harold Höffding, translated by Mary E. Lowndes.

"The Force of Mind, or the Mental Factor in Medicine," by Alfred T. Schofield.

"Psychotherapeutics," by C. Lloyd Tuckey.

"Treatment by Hypnotism and Suggestion, or Psychotherapeutics," by C. Lloyd Tuckey.

"Psychotherapy," The Center Publishing Co., New York. This last is a course of reading to which eminent doctors, psychologists and clergymen are contributing.

B. D. MYERS.

Indiana University, Bloomington, Ind., April 1, 1909.

LENIENCY toward our fellow-man is one of the most enviable attributes of mankind. Such is one of the many broad traits characteristic of the editorial department of *Collier's Weekly*. It doesn't credit the antivivisectionist with wilful or pleasurable prevarication, but because he, or more often she, suffers from that form of hysteria which Dana and others have called "zoophilism," and which gave a woman "melancholia over a cat, but lost a child without regret." Such symptoms Raymond and Janet found to be frequent among degenerate patients, and Dana finds the disease characteristically common among the indolent and unintelligent. The scientific ignorance of the antivivisectionist *Collier's* styles "abysmal," and in the interest in womankind it submits "to a certain brand of suffragette that an effective policy in the long run would be less clamor in imitation of Great Britain and more hard work." More careful study of vivisection and larger families upon which to bestow the blessings derived therefrom would also come in as legitimate therapeutic suggestions.

THE Ohio Chemical Works, a proprietary medicine house, of Toledo, Ohio, is now soliciting by letter the patronage of Indiana physicians. The particular product which the medical profession is asked to prescribe, and which is glowingly advertised to the public, is "germo tincturine." This nostrum, put up in bottles of two sizes at 25 and 50 cents respectively, with full directions attached, is recommended to physicians and public as being a compound put up from a prescription of an old German skin specialist (formula not given) and "possessing wonderful healing properties" for the cure of skin affections. If you have no use for "germo tincturine," then try "Hill's double chloride of gold tablets for the tobacco habit" (there is no such thing as the double chloride of gold), or the "celene corn remover," made by the same firm. The nerve of this firm is a conspicuous asset which may bring handsome returns if any Indiana physicians are so lacking in good sense as to use or recommend for use any preparations of unknown formulæ, and especially such preparations as are freely advertised to the laity.

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EDITORIALS

COLON BACILLUS INFECTIONS RESEMBLING TYPHOID.

That some strains of *Bacillus coli communis* are capable of causing a disease clinically identical with typhoid fever is strongly supported by the work of Coleman and Hastings, report of which is made in the *American Journal of Medical Sciences* for February, 1909. The symptom-complex of typhoid fever has been produced by *Bacillus faecalis alcaligenes*, the paratyphoid and paracolon bacillus (*Bacillus paratyphosus*, Types A and B), *Bacillus enteritidis* of Gärtner, and *Bacillus psittacosis* found by Nocard to be productive of pneumonic symptoms and associated with a high mortality. Since the paracolon group stands in closer relation to the *Bacillus coli* than to the *Bacillus typhosus*, the suspicion is aroused that some strains of *Bacillus coli* may be productive of a simulating clinical picture.

Two cases of clinically mild typhoid are briefly reviewed, in which the colon bacillus in pure culture was obtained from the patient's blood and, what adds to the interest of one of the cases, the patient's serum gave a positive Widal reaction at a 1 to 100 dilution at one stage of her illness, i. e., on the ninth day of the disease, a time when this reaction might be expected first to be present in a typical typhoid infection.

A review of the literature shows that in 1902 Fox obtained the colon bacillus from the blood of a patient with a clinical typhoid fever, a positive Widal reaction occurring on the thirty-second day, but not before. Burch, in the same year, under the title of "Colon Bacillus Infection," wrote that for ten years he had seen in his practice "cases of fever lasting from seven to ten days, which were ushered in by malaise, a gradual rise of temperature to a maximum of 103 to 104 degrees F. by the third or fourth day, diarrhea or, less frequently, constipation. The tongue was dry and often coated. Sometimes there was mild delirium; there was also more or less headache. Tympanites occurred in some

cases. The whole clinical picture was that of typhoid fever. The leucocytes were diminished in all cases. The urine was always acid and many times swarmed with motile organisms resembling *Bacillus typhosus*. The diazo reaction was, as a rule, well marked. The Widal reaction, made daily (dilution approximately 1 to 5), was absent in every case throughout its course, but the serum reacted promptly to the organism obtained under aseptic conditions from the bladders of the patients. This organism corresponded to all the cultural tests for *Bacilli coli communis*." In 1903 Evans and Sailer reported the case of a negro who, on February 12, suddenly became weak and dizzy, followed next day by diarrhea, anorexia and gastric disturbances. The spleen became palpable and rose spots appeared, the disease running the typical typhoid course, and the temperature reaching normal on March 6. A relapse occurred and lasted until the 16th. The highest leucocyte count recorded was 10,480, and the diazo reaction was present early in the disease. The serum tests were as follows: Against *Bacillus paratyphosus* (four strains) incomplete reaction at 1 to 10 on the twentieth day of the disease, but positive at same dilution on the forty-third day of the disease; against *Bacillus coli communis* (Pasteur Institute culture), complete reaction in 45 minutes at 1 to 100 on the twentieth day; on the forty-third day, complete reaction at 1 to 150 in one hour, partial at 1 to 200 and 250 in one and one-half hours (no increase later) and negative at 1 to 300 and 1 to 400 after twenty-four hours. A case likewise resembling typhoid was reported by A. Jacoby, the urine of which showed *Bacillus coli communis* in large numbers. Double pneumonia developed on the sixteenth day and the case terminated fatally. At autopsy the small intestine revealed congestion throughout its course, but no involvement of Peyer's patches. Cases of colon bacillus septicemia are reported by Bauermeister, Widal and Lémière, Bertelsmann and Mann, Lenhartz, Albaran, Fehling and others.

Continuing, the authors say that "with the possibility of the entrance of the colon bacillus into the blood during life proved, it seems to us that it need excite no surprise that some strains of this bacillus, in view of their close resemblance to some of the paracolons, may cause, under certain conditions, a disease clinically identical with typhoid fever. Buxton and one of us have suggested that even *Bacillus typhosus* is incapable of causing typhoid fever unless it develops in the general lymphatic system, including the spleen and bone marrow, and thence

invades the blood, where it is destroyed in large numbers. Localized infections with *Bacillus typhosus* do not cause typhoid fever. Lentz thinks that the same conditions of infection obtain in the typhoid-like types of paratyphoid infection. While there is no direct evidence to offer, from analogy it is probable that when the colon bacillus causes the symptoms of typhoid fever the distribution of the bacillus in the body is the same as in the case of typhoid and paratyphoid infections."

Regarding the nosological position to be given to the typhoid-like cases caused by the colon bacillus, the authors believe that, like the typhoid-like infections by the intermediate members of the typhaceæ, it is impossible to differentiate these cases from pure typhoid infections by clinical methods alone, but the assistance of the laboratory is essential. Isolated agglutination reactions against *Bacillus coli* do not positively signify infection by that organism, but an increment of agglutinins in the blood serum for a particular strain of *Bacillus coli communis* is evidence of a local or general infection with that strain.

Thus it would seem that so close is the relation between the typhoid and some of the colon bacilli that by clinical appearances alone we are unable to tell whether or not our patient is suffering from a true typhoid. And it would not be without the range of possibility to ascribe some of the so-called "atypical" Widal reactions to an infection with some one of the organisms of the colon group. Indeed, such a course would seem perfectly justifiable in such an instance as the one quoted by the above-mentioned authors in which a positive Widal reaction was obtained on the ninth day of illness of a patient whose blood culture showed pure colon bacillus.

And, again, it may ultimately be proven that many of our so-called "abortive forms" of typhoid are, in reality, colon bacillus infections. Further work with blood cultures and agglutination tests are necessary to clear up these points.

WHAT VIVISECTION HAS ACCOMPLISHED.

Writing for *Harper's Monthly Magazine* for April, 1909, Dr. W. W. Keen has very vividly portrayed to the lay mind the benefits to humanity achieved through experimentation on the lower animals, and ended by contrasting a summary of such achievements with what has been accomplished by the foes of medical research.

The history of surgery of the heart is reviewed from the appearance of Fischer's paper in 1867, based on a study of 452 published cases of wounds of the human heart, wherein it was shown that a patient might live for hours or even days with a wounded heart, and Robert's bold proposal in 1881 to sew up a wounded heart, despite Billroth's declaration that no surgeon who wished to preserve the respect of his colleagues would ever attempt to operate on the heart—up to the present time. Not until 1897 was the first successful case reported, that by Rehn, but so quickly was the result followed up that in June, 1908, there were collected 141 cases of operation on the heart, with recovery in 64, a percentage of over 45. This remarkable and highly gratifying result has only been accomplished very largely through the experimental work done on lower animals by Prus, Battelli, Kuliabko, Ricketts, Velich and Crile. Even more remarkable has been the later work done upon the blood vessels by Matas, Abbe, Murphy, Paye, Crile, Carrel, Guthrie and Downes, in which there have been made possible through experimentation upon the lower animals, the surgical cure of aneurism, the closure of wounds and the anastomoses of blood vessels, and the life-saving measure of direct transfusion of blood with all its blessings. It was only one step farther to the actual transplantation of parts of the body so that Lexer could report the case of a patient for whom he made a new nose from the lower end of the amputated femur of another patient, the bone meanwhile having been whittled into the shape of a nose with the two nostrils bored into it, and transplanted under the skin of the forearm, there to remain until its new attachment had formed, from whence it was later transplanted, skin and all, to the patient's face, a good, firm nose resulting, with no scar deformity of the forehead or cheek such as would follow the usual rhinoplasty. More striking yet have been the results achieved by Carrel and Guthrie, in which entire organs, legs, kidneys and ureters have been transplanted with a resulting complete function to the host. Though as yet little progress has been made in the conquest of cancer, yet much is promised in the near future, both as regards the etiology and treatment, and it is to animal inoculation and experimentation that we must turn for help in the fight against this dreaded foe of the human race. The remarkable reduction in the mortality rate in the operative treatment of goiter is due very largely to the knowledge acquired by animal experimentation concerning the importance of the small parathyroid glands.

Because animal surgery and human surgery are so identical in their results, is it anything but common sense that, as a necessary and precautionary step, the former should precede the latter? Is there an antivivisectionist extant who will offer himself to the cause of humanity as did Drs. Carroll, Lazear and Reed in the fight against yellow fever?

After all, Dr. Keen put the question very tersely when he asks, "Reckoned in rabbits, what is the value of your wife, your husband or your child?" Indeed, his succinct summary is worthy of verbatim quotation, and under caption of "What the Friends of Experimental Research Have Done" he says:

1. They have discovered antiseptic surgery, and so made possible the wonderful results of modern surgery. To complete his beneficent work, Lord Lister was compelled to go to France by reason of the stringency of the English antivivisection laws.

2. They have made possible practically all modern abdominal surgery, including operations on the stomach, intestines, liver, gall bladder, pancreas, spleen, kidneys, etc.

3. They have made possible all the modern surgery of the brain.

4. They have demonstrated how lock-jaw spreads from the wound; how sometimes it can be arrested and cured, and, still better, how it can be prevented, so that practically tetanus has been banished from surgical operations.

5. They have reduced the death rate in compound fractures from 65 per cent. to less than 1 per cent.

6. They have reduced the mortality of ovariotomy from 2 out of 3 to 2 or 3 out of 100.

7. They have abolished yellow fever.

8. They have made possible the cure of nearly all cases of hydrophobia.

9. They have cut down the mortality of diphtheria in New York City alone from 158 deaths per 100,000 in 1894 to 38 per 100,000 in 1905, and practically the same story is told all over the world.

10. By the use of the serum recently discovered by Flexner, at the Rockefeller Institute, they have changed the mortality in cerebrospinal meningitis from 75 and even 90 per cent. to 30 per cent. or less.

11. They have shown the cause of acute tetany after operation for goiter, so that it now can be prevented.

12. They have almost completely abolished the dangers of maternity, reducing its death rate of from 10 or more mothers out of every 100 to less than 1 in every 100.

13. They have shown the cause and the method of propagation and of prevention of the deadly malaria which devastates whole regions and armies. Its extinction is only a matter of time.

14. They have reduced the mortality of tuberculosis by from 30 to 50 per cent., for Koch's discovery of the tubercle bacillus is the foundation of all modern progress in the treatment of tuberculosis.

15. They have enormously benefited animals by discovering the causes and the dangers of tuberculosis. Texas fever, anthrax, glanders, hog cholera, and other infectious diseases of animals, thus enabling us to combat them more successfully or even to prevent them.

Under "What the Foes of Research Have Done," he continues:

"Nothing but stand in the way of progress. Not a single human life has been saved by their efforts; not a single household made happy. Not a single disease has had its ravages abated or abolished. The victims of their sincere but misguided zeal are men, women and little children. Even the lower animals may well cry, 'Save us from our friends.'"

EDITORIAL NOTES

DR. DAVID W. STEVENSON, of Richmond, was elected president of the Methodist Brotherhood of Richmond at a recent banquet of the brotherhood.

OUR March number came from press a week late owing to the extra time required to arrange and correct the state association membership list which was published in that number. Many letters of inquiry from those who noticed that THE JOURNAL was late indicate that THE JOURNAL is not only appreciated, but missed if it fails to come from press on time.

AGAIN we are constrained to request that all copy for THE JOURNAL be typewritten when submitted for publication. Our publishers justly refuse to accept copy unless typewritten; hence it means double work for the office force of THE JOURNAL when our copy comes to us not so prepared. We have recently had submitted for publication several very excellent papers, but handwritten, and none too legibly at that, so that we are forced to ask that this practice be discontinued in order that our time may be put to better use for THE JOURNAL.

It should be remembered that the next session of the Indiana State Medical Association will be held in Terre Haute either during the last week in September or the first week of October. The scientific program will be limited to thirty papers, of which twenty will be presented before the sections and ten at general meetings. Those who desire to present papers should at once file applications with the program committee. The completed papers must be in the hands of the program committee on or before July 1.

THE *National Druggist*, the champion of the proprietary medicine association, the defender of much that will not stand the light of honest investigation, the openly declared foe of the American Medical Association and the enemy of medical progress, is out with another vituperative editorial commenting on the withdrawal of Dr. C. A. L. Reed's name for appointment as first lieutenant in the Army Reserve Medical Corps. The enmity of the *National Druggist* to Dr. Reed arises from the fact that Dr. Reed has advocated and stood for some honesty among manufacturing pharmacists, and was one of the leaders of the A. M. A. who fought for a higher standard in the drug trade.

Some advertising agency may be responsible for the following "recipe for success," which has been posted in various localities:

Early to bed and early to rise,
Work like h— and advertise.

Dr. J. R. Hunter, of Huntington, may have thought that he could succeed by following this receipt, but the members of the Huntington County Medical Society have not been willing to approve such methods and have expelled him from the society for advertising in the daily papers. His particular offense consisted in claiming, through advertisements in the public press, the possession of superior skill in the treatment of diseases of women and children.

THE regular annual meeting of the Eighth District Medical Society will be held at Winchester, Thursday, April 22. The program will consist of a serious consideration of "Suggestion as a Therapeutic Measure," and the papers, "The Psychologic Aspects of Suggestion," by Prof. E. B. Lindley, Indiana University, and "Suggestive Therapeutics; Its Use and Abuse," by Dr. Frank B. Wynn, Indianapolis. Postprandial, "The Religeo-Medical Movements," Rev. C. S. Pier, Union City; "Autosuggestions," Dr. F. G. Keller, Alexandria; "Educating the Public," Dr. W. A. Hollis, Hartford City; "Premature Deliv-

ery," Dr. I. N. Trent, Muncie, Ind., and "The Individualization of Patients," Dr. W. D. Schwartz, Portland.

THE animus of the attacks made on the A.M.A. and its *Journal*, and those who have been instrumental in broadening and elevating the sphere of usefulness of the Association is easy to understand and explain. The opposition arises purely because the association has made progress and raised the standard of honesty in things-medical. The opposition comes from interests that would prostitute the American medical profession to commercial ends. The establishment and work of the Council on Pharmacy and Chemistry has been the means of incurring the displeasure and enmity of a whole lot of dishonest pharmaceutical manufacturers, and their friends, who, until their methods were exposed, have profited at the expense of the medical profession and the suffering public. If you hit a dog with a brick he is going to howl, and the more he is hurt the longer and louder he will howl. The enemies of the American Medical Association have been hit hard when they were forced to be honest, and quite naturally they are howling, long and loud. But the cause is understood, and right thinking physicians will pay no attention to the howl.

G. DOCK, New Orleans, in *Journal A. M. A.*, April 10, gives his observations of the mistakes of spelling in the examination papers of medical students. He doubts the existence of many incorrigible bad spellers and thinks that poor training is responsible in nearly all cases. He also allows for mistakes that can be easily explained by slips of the pen or mind, such as confusion of ei and ie, of single or double e, and other double letters. He also overlooks an isolated phonetic spelling, but gives a list of some of the more flagrant examples he has encountered in his experience. He also notices the misspellings of proper names and shows why he thinks there is a close relation between such mistakes as he has submitted and imperfect technical training in other respects. The causes of the condition are, he thinks, chiefly the following: (1) imperfect training in the pre-collegiate years; (2) imperfect scrutiny of candidates for admission to the medical schools; (3) looseness with respect to scholarly fitness all through the medical course. The fact that his observations were made on two years' students in a university shows the need of greater care as to scholarship. The habit and effort for improvement has not been required and Dock has been told by the constant perpetrator of a blunder that he did not come there to learn English. Dock thinks that a constant determined effort will be needed to alter this state of affairs.

MANY physicians have the habit of saying that a patient has "stomach trouble," "liver trouble," "bowel trouble" or "kidney trouble" and fail to appreciate the fact that such a diagnosis is a display of ignorance as to the existing pathological condition.

Recently a physician having a large practice referred a patient to the writer with the statement that the patient had suffered and been treated for several months for "kidney trouble." When asked what form of kidney disease the patient suffered with the doctor replied, "Why, nephritis, of course." Upon further inquiry it was discovered that no urinalysis had been made and that the diagnosis was based upon pain in the back, and the patient's statement that the urine was high colored.

Great quantities of pepsin compounds and dyspepsia tablets are prescribed by some physicians for "stomach trouble" when the true nature of the diseased process in the alimentary canal, if such exists, is not known by the attending physician.

Our present-day aids in making diagnosis, including laboratory as well as clinical findings, make it inexcusable for any physician to make diagnoses so thoroughly lacking in evidence of the true nature of the disease. Furthermore, if any physician does not know the true nature of the disease he is called upon to treat, then it is his duty, not only to the patient but to himself, to call to his aid the services of some one who can give the patient the required consideration in order to arrive at a fairly definite and correct diagnosis.

Now that about half the counties of the state have held elections and voted "dry" on the temperance question, it will be interesting to watch the results and await developments along many lines. That the mortality and morbidity would be greatly reduced by state-wide prohibition, there can be no doubt. The deleterious effects from the excessive use of alcohol upon the human organism, in reducing the resistance to infection and disease, are now too well recognized to admit of further argument. Equally patent is it to all that there must needs be a proportionate decrease of vice and crime committed within our borders when the liquor traffic is effectually and permanently abolished.

From those districts that are now operating under the new regime the reports are already coming in from absolutely non-partisan sources that instead of business being depressed and crippled, as some of the interested parties had predicted would result from prohibition, there has been a very noticeable effect in the opposite direc-

tion. Instead of a boisterous, loitering Saturday-night crowd on the streets of the centers of population, there has come a wave of quiet, businesslike industry that results from the family wage-earner's home-coming at the week end with a full purse instead of a full belly. So that from present indications there is little to fear from the business standpoint. Granting that there might be a slight increase in taxes consequent upon the abolition of saloons and their license fees, would not there also be a very marked increase in the number of taxpayers and probably a greater ability among most people to pay higher taxes? For example, suppose all the alcoholics on a doctor's ledger were to cease squandering their money for liquor and would use their earnings to pay their debts instead, could we not well afford to pay the difference in taxes?

It is also interesting to note that the temperance wave is not limited to our state alone, but is spreading throughout the country and even abroad. From the *London Times* comes the following, quoted by the *Literary Digest* of April 3, 1909: "The figures for Great Britain's drink bill for 1908, just published, show a remarkable falling off. Previous years have seen a decrease, but the present diminution amounts to \$30,000,000, and leads the *London Times* to declare that 'it must inevitably be recognized that the nation is steadily becoming more temperate by its own free choice.'

CORRESPONDENCE

INFORMATION WANTED.

MUNCIE, March 23, 1909.

Editor THE JOURNAL:—Can not some of the readers of THE JOURNAL help me to secure the Christian names or initials of the following named persons? All were present at the formation of the State Medical Society in 1849. I give them as printed:

- Drs. Sinex and Scribner, of New Albany.
- Drs. Henkle and Farquher, of Wabash. I find Dr. Farquher (also spelled Farquhar) later accredited to Logansport.
- Dr. White, of Prairieton.
- Dr. Weldon, of Covington.
- Dr. Hunt, of Laporte.
- Dr. Frances, of Ripley County.
- Dr. Finley, of Columbus.
- Dr. Wiley, of Richmond.
- Dr. Foster, of Bloomington.
- Dr. Rogers, of Madison.
- Drs. Eldridge and Taylor, of Dearborn County.
- If any one can aid me, please send to me by letter or postal. Through private correspondence,

I have secured a number of names. These seem to be puzzling. Possibly "Sinex" is a typographical error.

G. W. H. KEMPER.

[In the letter under above heading in the March JOURNAL, Dr. Kemper asks information in regard to a record of proceedings by Dr. Thomas W. Flover. This name should be Dr. Thomas W. Florer.—ED.]

DEATHS

DR. G. W. WALLS died at his home in Mitchell, Ind., March 20, of acute dilatation of the heart, aged 63 years..

DR. JAMES F. GRIMES, for fifty-six years a practitioner of northern Indiana: the oldest member of the Physicians' Club of Mishawaka, Ind.; died at the home of his daughter at that place, February 26, aged 85.

DR. ELBERT W. McALLISTER (Long Island College Hospital, Brooklyn, 1886); a member of the St. Joseph County Medical Society and a veteran of the Civil War; died at his home in South Bend, March 5, from cerebral hemorrhage, aged 63.

DR. E. G. BURLINGAME died at his home in Oakland City, March 20, following a short illness from acute nephritis, aged 45. He was born at Hiramsburg, Ohio, in 1867, and graduated from the Kentucky School of Medicine in 1895. Dr. Burlingame has been a resident of Oakland City for the past twelve years, at one time being in partnership with Dr. McGowan, but about two years ago this partnership was dissolved. At the time of his death Dr. Burlingame was a member of the St. Joseph County Medical Society and the Indiana and American Medical Associations.

PERSONALS

DR. FRED METZ, of Ossian, is recovering from an appendicitis operation.

DR. W. H. DINGS, of Mitchell, is recovering from an attack of appendicitis.

DR. HIRAM V. SWERINGEN, one of the oldest physicians in Fort Wayne, is seriously ill.

DR. E. O. LITTLE has moved from Indianapolis to Elkhorn, Ill., where he will practice medicine.

DR. and MRS. H. H. WHEELER, of 1816 N. Capitol Ave., Indianapolis, announce the birth of a boy.

DR. HENRY RANKE, of Fort Wayne, left for Germany, on April 1, where he will do post-graduate work.

DR. NORMA B. ELLES, of Chicago, has taken a position as assistant to Dr. Albert E. Bulson, Jr., of Fort Wayne.

DR. PERRY WOOLERY and family, who spent the winter at Asheville, N. C., have returned to their home in Elkhornville.

DR. LUELLA SCHNECK has removed her office from Penn. and New York streets to 320 N. Meridian street, Indianapolis.

DR. EDWARD F. KRUSE has returned from a year's postgraduate study in Europe and located in his home city, Fort Wayne.

DR. R. O. McALEXANDER has moved his residence from 16th and New Jersey streets to 2101 N. Delaware street, Indianapolis.

DR. O. B. PETTIGEJOHN, of 416 Blake street, Indianapolis, has moved his residence to the Dimmick Flats, 826 N. Illinois street.

DR. O. V. SCHUMAN, Columbia City, has been appointed by Governor Marshall to a position on the tuberculosis hospital commission.

DR. GOETHE LINK, of Indianapolis, has entered a balloon for the national aeronautic race, which will be held in Indianapolis the coming month.

DR. J. M. PHIPPS has removed his office from the Knights of Pythias building to 326 Board of Trade, Indianapolis, and is with Drs. Ross and Cunningham.

DR. JOHN F. BARNHILL, of Indianapolis, held a clinic on the diseases of the ear, and also lec-

tured on the same, at the Jefferson Medical College, Philadelphia, on March 29.

DR. G. W. H. KEMPER, of Muncie, has arranged to publish in book form the series of articles on the medical history of Indiana that are now appearing in *THE JOURNAL*.

DR. CLARENCE COLE, captain and medical officer of the United States Army, who has been stationed the past year at Fort Benjamin Harrison, has been ordered to Whipple Barracks, Ariz.

DR. CALVIN I. FLETCHER and wife have sailed from New York City to Messina, Italy, and various Mediterranean ports. Dr. Fletcher's main purpose is to take photographs of the earthquake ruins.

DR. LILLIAN B. MUELLER, who will graduate this year from Indiana University School of Medicine, has received an appointment as house physician at the Woman's Hospital and Infants' Home at Detroit, Mich.

DR. HERBERT WOOLEN, who has been specializing in the ear, nose and throat, has given up the practice of medicine to become secretary of the American Central Life Insurance Co., with headquarters at Indianapolis.

DR. FRED V. OVERMAN has returned from New York City, where he took several courses with the leading nose and throat specialists, and has opened his office again with Dr. L. F. Page, in the Willoughby block, in Indianapolis.

DR. WM. T. S. DODDS has been delivering a course of lectures on the prevention of tuberculosis to the people of the tenement districts of Indianapolis. These lectures are under the auspices of the Children's Aid Association.

DR. THEODORE WAGNER, of the Odd Fellows building, Indianapolis, and his son Fletcher, who has just completed his term as interne at the St. Vincent's Hospital, Indianapolis, have planned a trip to the medical centers of Europe and will be gone about eight months.

DR. WM. N. WISHARD's term of service on the State Board of Health expires this month. While

there are many applicants for this position, it is generally understood that the excellent work done by Dr. Wishard will commend him especially for reappointment, as there are few men in Indiana who have been as instrumental as Dr. Wishard in securing good public health legislation.

NEWS, NOTES AND COMMENTS

THE Third Councilor District Medical Society will meet in Mitchell the last of April. Its present officers are: Dr. W. L. McClain, of Scottsburg, president, and Dr. David Cohen, of Jeffersonville, secretary.

THE annual session of the Ohio State Medical Association will be held in Cincinnati, May 5, 6 and 7, 1909. A special and cordial invitation has been extended to the members of the Indiana State Medical Association to attend this session.

LECTURE and laboratory courses in tropical medicine, public health and sanitation, including school and factory inspection, have been inaugurated at the New York Post-Graduate Medical School and Hospital, and will be given with the cooperation of the U. S. Army and U. S. Navy Medical Corps.

THE American Proctologic Society will hold its eleventh annual meeting at Atlantic City, June 7 and 8, 1909. The headquarters and place of meeting will be Haddon Hall. A program of twenty-six papers is offered. The president is Dr. Geo. B. Evans, of Dayton, and secretary Dr. Lewis H. Adler, Jr., of Philadelphia.

A MOVEMENT is under way for the abolishment of the city dispensary, of Indianapolis, and the charity work of that character will be concentrated at the Bobbs Free Dispensary at the medical college. This is a wise move, both from the standpoint of the patient as well as the clinician and student. It will make one large clinic in Indianapolis instead of several, as have existed before.

THE YOUNGER PHYSICIANS' CLUB, of Indianapolis, had their second meeting for 1909 on Monday evening, March 22. Captain Palmer, of the Regular Army Medical Corps, had an interesting paper on tropical diseases, after which a Dutch lunch was served in connection with a vocal entertainment. These meetings are held about four times a year, in the Commercial Club

rooms, and have proven of great benefit in getting the physicians of Indianapolis acquainted with each other.

THE first automobile ambulance in Indiana has just been put into service for the Indianapolis City Board of Health. It is an electric machine and was made by the Waverly company. It can accommodate four people lying down and also has some of the accessories of an elegant touring car. There are two portable electric lights, so that the ambulance surgeon can make examinations as well as dress patients on his way to the hospital. In fact this ambulance becomes a portable hospital, and this was recently demonstrated when a child was born in the ambulance while hurrying the mother to the hospital. The driver's seat is enclosed, so he also may be protected from the weather.

ON SATURDAY, March 27, the Indianapolis *News* had fifteen columns of patent medicine advertising, which included all kinds, from the fake consumption cure to soothing syrups. At the top of the first column of the third page was an advertisement of a patent medicine advertised to cure all colds, etc., and immediately below this was an Associated Press dispatch from South Bend telling of the death of a five weeks' infant, caused by soothing syrup that the mother had given to cure the child of a cold; the syrup containing enough morphin to cause the death of the child. The advertisement and the press dispatch below it gave a good example of the "before and after taking."

AS MANY western physicians will pass through Indianapolis on their way to the Atlantic City meeting of the American Medical Association, the Pennsylvania Railroad has under consideration a plan to run a special Pullman train from St. Louis through to Atlantic City without change. This train will be for the exclusive use of physicians and their wives. The Indiana contingent will join this train at Terre Haute, Indianapolis and Richmond, the only stops in Indiana, some time Sunday afternoon or evening, June 6, the exact time of which will be given later. The physicians from central and southern Ohio may join this train at Columbus, Ohio. While a medical thesis or a surgical case report will not be a "sine qua non" for entrance to this train, yet no one but physicians and their families will be allowed on it.

SINCE the publication of our March number the Council on Pharmacy and Chemistry has acted on the following products:

Articles accepted for N. N. R.:
 Enzymol (Fairchild Bros. & Foster).
 Sabromin (Farbenfabriken of Elberfeld Co.).
 Medinal Tablets, 5 grains (Schering & Glatz).
 Pituitary Substance (Anterior Lobe) (Desiccated).
 Pituitary Substance (Armour & Co.).
 Pituitary Substance (Posterior Lobe) (Desiccated).
 Pituitary Substance (Armour & Co.).
 Parathyroid Gland (Desiccated), Armour & Co.
 Articles accepted for N. N. R. Appendix:
 Compressed Tablets, Anesthesia, 2½ grains (Sharp & Dohme).
 Solution Atoxyl, 10 per cent. (Sharp & Dohme).
 Solution Atoxyl, 10 per cent., with Novocaine 1 per cent. (Sharp & Dohme).
 Compressed Tablets, Atoxyl and Quinine Comp. (Sharp & Dohme).
 Compressed Tablets, Benzosol, 2½ grains (Sharp & Dohme).
 Compressed Tablets, Benzosol and Codein (Sharp & Dohme).
 Compressed Tablets, Blaud, with Atoxyl (Sharp & Dohme).
 Compressed Lozenges, Orthoform, ½ grain (Sharp & Dohme).
 Compressed Tablets, Pyramidon, 1½ grains (Sharp & Dohme).
 Articles reconsidered and rejected:
 Salit (Heyden Chemical Works).
 Transfer of agency:
 Stovaine (formerly sold by Walter F. Sykes, New York, now sold by the Parmele Pharmacal Co.).

SOCIETY PROCEEDINGS

INDIANA STATE MEDICAL ASSOCIATION

The following is a list of doctors who have paid dues to the Indiana State Medical Association since March 10, 1909:

CARROLL COUNTY	MILLERSBURG Dr. W. Burt Siders
OCKLEY	GIBSON COUNTY Dr. John M. Williams
Dr. W. E. Ticeen	OWENSVILLE Dr. C. C. Crum,
CLARK COUNTY	GARY Dr. E. R. Luckett
Dr. C. C. Crum, Gary	PRINCETON Dr. Chamers M. Lindley
CRAWFORD COUNTY	GRiffin Dr. F. M. Martin
MARENGO	HENRY COUNTY GREENCASTLE Dr. L. H. Brubaker
PLAINVILLE	Dr. W. H. Stafford
Dr. E. D. Millis	Dr. W. C. Van Nuys
DAVIESS COUNTY	MADISON COUNTY ANDERSON Dr. C. E. Phipps
PLAINVILLE	ALEXANDRIA Dr. A. E. Otto
Dr. E. D. Millis	MARION COUNTY INDIANAPOLIS Dr. J. F. Berry
DECATUR COUNTY	Dr. P. B. Coble
GREENSBURG	Dr. W. P. Garshwiler
Dr. W. G. French	Dr. Alice Hobbs
DELAWARE COUNTY	Dr. W. D. Hoskins
MUNCIE	Dr. J. L. Master
Dr. C. A. Martin	Dr. S. L. Malpos
DUBOIS COUNTY	
FERDINAND	
Dr. E. E. Schriever	
ELKHART COUNTY	
GOSHEN	
Dr. F. M. Ihrig	

MARSHALL COUNTY**PLYMOUTH**

Dr. N. T. Lindquist

BOURBON

Dr. R. M. Sturmount

TIPPECANOE

Dr. J. H. Kiser

OWEN COUNTY**QUINCY**

Dr. D. H. McDonald

PARKE COUNTY**ROCKVILLE**

Dr. Jos. Shonkwiler

Dr. C. W. Overpeck

BELLMORE

Dr. R. C. Peare

WALLACE

Dr. C. A. Caplinger

JESSUP

Dr. Jas. Towey

SULLIVAN COUNTY**PAXTON**

Dr. Coatney Ralph

Walters

TIPTON COUNTY**KEMPTON**

Dr. Wilbur F. Dunham

VANDERBURGH COUNTY**EVANSVILLE**

Dr. J. N. Baughman

Dr. L. B. Bitz

Dr. T. L. Bryan

Dr. D. B. Cain

Dr. W. F. Cleveland

Dr. W. R. Cleveland

Dr. C. F. Cluthe

Dr. W. H. Coleman

Dr. M. J. Compton

Dr. Earl Conover

Dr. H. F. Dixon

Dr. W. S. Elrich

Dr. W. H. Field

Dr. B. L. W. Floyd

Dr. C. B. Harpole

Dr. C. W. Hartloff

Dr. G. P. Hodson

Dr. M. D. Hudson

- Dr. J. N. Jerome
 Dr. C. Kelsay
 Dr. J. H. Kerth
 Dr. C. Knapp
 Dr. C. E. Laughlin
 Dr. S. R. Laubscher
 Dr. W. J. Laval
 Dr. E. Linthicum
 Dr. J. C. McClurkin
 Dr. W. E. McCool
 Dr. J. H. McCutchan
 Dr. E. C. Macer
 Dr. Thomas Macer
 Dr. W. S. Pollard
 Dr. W. S. Pritchett
 Dr. W. J. Reavis
 Dr. P. C. Reitz
 Dr. B. S. Rose
 Dr. S. K. Sessions
 Dr. T. H. Taylor
 Dr. D. G. Tweedal
 Dr. G. W. Varner
 Dr. E. J. Verwayne
 Dr. C. G. Viehe
 Dr. C. H. Viehe
 Dr. Philip Warter
 Dr. J. B. Weever
 Dr. W. P. Woods
McCUTCCHANVILLE
 Dr. W. F. Clippinger
HOWELL
 Dr. D. A. Cox
 Dr. J. W. Phares
INGLEFIELD
 Dr. B. W. Begley
 Dr. J. W. Stork
WABASH COUNTY
WABASH
 Dr. T. R. Brady
 Dr. W. A. Domer
 Dr. L. W. Smith
 Mrs. L. F. J. Smith
 Dr. N. H. Tbompson
NORTH MANCHESTER
 Dr. Z. M. Beaman
WHITLEY COUNTY
COLUMBIA CITY
 Dr. F. G. Grisier
 Dr. N. I. Kitcart
 Dr. D. S. Linvill
 Dr. O. V. Schuman

ALLEN COUNTY.**FORT WAYNE MEDICAL SOCIETY.**

(Meeting of March 2, 1909.)

Society met in regular session with thirty-four members present. Minutes of previous meeting read and approved.

Clinical case report by Dr. M. I. Rosenthal. Boy, 12 years of age, was coasting down hill on a sled, his sister behind him on the sled. Ran into the limb of a tree an inch in diameter, covered with ice. The limb pierced his clothing, scrotum, and directing itself diagonally pierced the abdomen at the internal ring, caught up a number of coils of intestines, but did not perforate same, and passing upward and backward picked up the large bowel at mesenteric attachment, piercing the right kidney and lacerating it, then going through the diaphragm into the chest, fracturing the tenth rib

posteriorly, and came out of the chest wall, striking his sister behind him on the sled, but not injuring her. Was taken to hospital, where coils of small intestine were found contused but not perforated. Opening into large bowel closed. Abdomen closed except for small drain. Uneventful recovery.

The Tonsil and Its Surgery was the title of a paper by Dr. K. K. Wheelock, in which he said that the tonsils are a hot bed of infection and are frequently the cause of headache, and the point of entrance in many cases of tuberculosis. Daughters of operation are septic infection, hemorrhage, anesthetic, and aspiration pneumonia. Gave description of operation done by himself and enumerated instruments used.

Discussion by Drs. Glock, Rhamy and Wheelock.

Chronic Interstitial Nephritis was the title of a paper by Dr. J. S. Boyers in which he gave the etiology, pathology, symptoms, prognosis and treatment. Diet should be mixed, and stomach should receive attention. Recommended warm water bathing at bedtime, and medicinal bitter tonics, nitroglycerin, K. I. and calomel. Quoted ten fatal cases from his practice seen in the last nine years, ages ranging from 38 to 76. All had lived strenuous lives and were hearty eaters.

Discussion by Drs. Beall, Rhamy, McOscar, Drayer, Porter, Weaver, Buchanan and Rawles. Closed by Dr. Boyers.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of March 9, 1909.)

Society met in regular session in the assembly room with forty members present. Minutes of previous meeting read and approved.

Clinical case reports. Dr. M. I. Rosenthal exhibited a case of stricture of the esophagus in a very small infant. Made gastrostomy with intent to pass instruments upwards subsequently. About five or six days after the operation she took a glass of milk and swallowed it. He referred to the use of potato and milk for the purpose of using the radiograph.

Discussion by Drs. Porter, Wheelock and Mouser.

Dr. L. P. Drayer reported a case of congenital dislocation of the hip, and presented a radiograph of the condition. Patient, girl over 11 years. Two or three previous attempts at reduction had failed. Another attempt was made, accomplishing the result as shown by radiograph, showing reduction, or rather a new cavity made for the head of the femur to rest in. Dr. Drayer presented this case because Lorenz and others state that it is useless to attempt to reduce the hip after the 7th year.

Case 2. Dr. Drayer presented a case of aneurysm, first seen Nov. 23, 1908. Patient, man aged 42, gave vague history of specific disease, but could not be confirmed. Father of one child. Pain in left shoulder blade. Blood pressure 140 mm. right and 110 mm. left. No disturbance of vision. After onset of boarseness, fluoroscopic examination was made, showing tumor in upper left thorax; and diagnosis of aneurism was made. Patient put on Hg. injections and absolute rest ordered. March 7 patient spat blood, and died 6 hours later. Postmortem showed most extensive aneurism. No physical sign of heart lesion. Tracheal tug was most marked in this case, but there was an absence of retinal changes. The x-ray of most help in diagnosis.

Case 3. Patient woodworker; family history clean. Last March had pleurisy; was tapped, and it recurred.

Was tapped 10 times in all, about 20 pints of fluid being removed. After second tapping t. b. found in sputum. In October put patient in open air and prescribed succinimide of Ig. injections, and he has had 44 in all. Cough has ceased; gained in weight, and pulse standing is 100. Had him on tuberculins, which if continued would have killed him.

Discussion by Drs. Wheelock, Morgan and Drayer.

Dr. G. Van Sweringen took up the question of non-specific urethritis, citing a number of cases. Discussed by Dr. Dueenling.

Bylaws were amended so that the \$5.00 dues include the indigent fund.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of March 16, 1909.)

Society met in regular session, March 16, in the Assembly Room, with thirty-seven members present. Joint session with druggists. Minutes of previous meeting not read.

Dr. E. R. Larned of Detroit, Mich., after being introduced by the president, gave an illustrated talk on "The Practical Application of Bacteriology to the Cure of Disease," using the stereopticon to illustrate the lecture. He showed the pictures of famous men, such as Virchow, Pasteur and many others to whom credit is due for advancement in the subject of bacteriology. He gave the intricate points in the manufacture of diphtheria antitoxin, and various other serums, and showed a number of slides of the various bacteria. Discussion.

Dr. Bulson moved that a vote of thanks be extended Dr. Larned. Carried.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of March 23, 1909.)

Society met in regular session in the assembly room, with 37 members present. In the absence of the secretary, Dr. E. M. Van Buskirk was appointed secretary pro tem.

CASE REPORTS.

Sinus Thrombosis Following Mastoiditis.—Two cases reported by Dr. Bulson.

Case 1. Patient developed high temperature and delirium a few days after onset of earache. Mastoid tender but not swollen. Posterior superior wall of the meatus reddened and swollen. On operation antrum was found full of pus, the floor of the antrum necrosed, and a collection of pus lying on the dura. Sinus exposed but not opened. Temperature dropped immediately after operation, but went up within a few hours. Two days later temperature 105. Sigmoid sinus opened and a clot extending from the knee to the jugular bulb removed. Patient recovered.

Case 2. High temperature, swelling and tenderness of the mastoid followed a few days after the onset of earache and discharge from the middle ear. Patient received no attention for several days, and when first seen exhibited manifestations of pneumonia in addition to signs of mastoiditis and sinus thrombosis. Parents refused to leave patient in hospital for operation as soon as deemed advisable. Patient returned home and soon exhibited characteristic symptoms of pyemia, including high temperature, severe chills and pyemic abscesses in various parts of the body. Death two weeks later.

Intestinal Tuberculosis was the title of a paper by Dr. G. W. McCaskey, in which he discussed the symp-

toms, methods of diagnosis and treatment. He emphasized the importance of early diagnosis by careful observation of the temperature and other symptoms, together with the well known tests for tuberculosis.

Discussion by Drs. Mouser, Gilpin, Rhamy, Dancer, Wheelock, Bruggeman, Porter and Weaver.

Neurasthenia was the title of a paper by Dr. S. D. Sledd, in which he stated that this condition is usually found in connection with some pathological condition, the latter oftentimes being obscure. Attention was called to the suggestive treatment and the methods employed by the various schools practicing mental therapy. Drugs are seldom indicated except to meet conditions produced by pathologic states which affect the neurasthenia. Optimism on the part of the physician is necessary. Change of climate and environment often beneficial.

Discussion by Drs. Dancer, Rawles, McOsear, B. Van Sweringen, Calvin, Wheelock and Buchman.

Adjourned. E. M. VAN BUSKIRK, Sec. Pro Tem.

BARTHolemew COUNTY.

The regular meeting of the Bartholomew County Medical Society was held March 9. The paper of the session was read by Dr. F. W. Samuels, of Louisville, Ky., on the subject, "The Relationship Between Diseases of the Gall-Bladder and Pancreas." Discussion opened by Dr. A. P. Rooth, of Columbus.

Adjourned.

B. A. CLOUSE, Sec.

DELAWARE COUNTY.

The regular meeting of the Delaware County Medical Society was held March 5. Minutes of previous meeting read and approved.

Dr. C. J. Stover reported three cases of puerperal eclampsia occurring in the same house, six months intervening between cases, and brought forth the question as to whether there might have been some connection between the occurrence of these cases and the environments of the patients.

Dr. Geo. R. Green reported, as being of unusual occurrence, two cases of mastoiditis in two members of the same family, in each of which he did a mastoid operation in the same afternoon. These cases followed scarlet fever.

"The Sixth International Congress on Tuberculosis" was the subject considered. Dr. U. G. Poland talked on "The Meeting in General," Dr. W. W. Kemper "The Exhibits," and Dr. J. I. Ball dealt mainly with "The Discussion of Dr. Koch's paper, The Diagnosis of Tuberculosis, and the Social and Sociological Aspect of the Tuberculosis Question."

Dr. C. E. Rea opened the discussion by saying that tuberculosis is both contagious and infectious. Early diagnosis is of utmost importance.

Dr. C. E. Miller advocated the early training of children as a means of preventing the spread of tuberculosis.

Dr. Cowing advised the use of the influence of physicians upon legislators to secure legislation furthering hygienic conditions, especially in schools. Stress was laid upon the importance of pure air and good food.

Dr. G. R. Green stated that the outdoor treatment of tuberculosis is as old as the exodus of the Israelites from Egypt. Also that it was essential that the diagnosis of tuberculosis be made before the discovery of

tubercle bacilli in the sputum, and that prolonged expiration, morning depression and evening elevation of temperature, and loss of weight, assist in making an early diagnosis.

Dr. Chas. A. Martin was unanimously elected to membership in the society.

Dr. Geo. R. Green presented the following resolution, which was unanimously adopted:

WHEREAS, Our associate in medicine, Dr. G. W. H. Kemper, is preparing for publication in THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION a series of sketches of the medical history of Indiana; and

WHEREAS, We feel that they will become more and more valuable as time passes; therefore be it

Resolved, That this society takes great pride in the efforts of Dr. G. W. H. Kemper to furnish the medical world a résumé of the life and work of the profession in Indiana, collecting, correcting and compiling for future reference this unarranged and fragmentary history from the date of the organization of the state, and sincerely hope and ask that his articles be properly preserved and kept as a part of the valued archives of the State Medical Society, and that a copy of this resolution be forwarded to THE JOURNAL OF THE INDIANA STATE MEDICAL ASSOCIATION.

Adjourned.

H. S. BOWLES, Sec.

FOUNTAIN-WARREN COUNTY.

The regular quarterly meeting of the Fountain-Warren County Medical Society was held March 4. At that time the following subjects were presented:

"Infectious Etiology," by Dr. L. A. Bolling, of Attica; "Natural and Acquired Immunity," Dr. H. N. McKee, Covington; "Toxins and Antitoxins," Dr. Chas. J. Finney, Attica; "Agglutinins and Precipitins," J. R. Hicks, Covington; "Bacteroidal Serums and Cytotoxins," C. G. Beckett, Attica; "Phagocystosis and Its Relation to Ehrlich's Side Chain Theory," Alva L. Spinning, Covington; "Immunity and the Opsonic Theory," W. A. Cochran, Danville, Ill.; "The Side Chain Theory of Ehrlich," Alfred S. Jaeger, Indianapolis; "Laboratory Methods," Dr. Simonds, of the State Bacteriological Laboratory, Indianapolis.

In response to the appeal through the *Journal of the A. M. A.*, an offering of \$12.95 was made in behalf of the family of Dr. Carroll.

Adjourned.

C. G. BECKETT, Sec.

HAMILTON COUNTY.

The Hamilton County Medical Society held its regular monthly meeting Tuesday, March 2, and elected the following officers for 1909: President, Dr. C. H. Tomlinson, Cicero; vice-president, Dr. J. E. Hanna, Noblesville; secretary-treasurer, Dr. F. A. Tucker, Noblesville; delegate to state association, Dr. F. A. Tucker; alternate, Dr. T. O. Reddin.

Adjourned.

F. A. TUCKER, Sec.

HUNTINGTON COUNTY.

The Huntington County Medical Society met in regular session March 9, 1909. The paper of the evening was given by Dr. W. C. Chaffee, who talked on the subject, "Consultations." Dr. Chaffee is one of the oldest practicing physicians in this county, and handled the subject in a very interesting manner.

Charges of unprofessional conduct and violation of the code of medical ethics had been brought against Dr. J. L. Hunter, of Huntington. The committee by whom the charges had been investigated and brought, recommended expulsion from the society. The doctor received due notice of these charges, with copy of charges and notice to appear at the meeting and defend same. He did not appear, nor did he defend himself from the charges (unethical newspaper advertising), but rather insisted upon continuing his practices. It was then moved and carried that the doctor be expelled from the society.

Adjourned.

MAURICE H. KREBS, Sec.

KOSCIUSKO COUNTY.

The regular meeting of the Kosciusko County Medical Society was held March 30. Minutes of previous meeting read and approved.

"The Present Status of Serum Therapy" was the title of a paper by Dr. N. Austin Carey, of Silver Lake, in which he emphasized his belief that very little can be accomplished along the lines of serum therapy without frequently obtaining the opsonic index. He has had satisfactory results with serum therapy in tuberculosis of the genito-urinary tract.

In opening the discussion, Dr. F. H. Foster raised the question of the reliability of the opsonic index as a guide, in view of the fact that the opsonic findings by good men in the same ease are not always the same.

Dr. M. G. Yocom and President Burke spoke of the value of diphtheria antitoxin.

Dr. C. C. DuBois of Warsaw, in speaking of the opsonic index, stated that it was not a definite fixed factor, but a ratio. He said it was the ratio between the number of bacteria ingested by a certain number of leukocytes, as compared with the number of bacteria which would be normally ingested.

Dr. J. H. Bowser, of Syracuse, reported several cases of empyema, following pneumonia.

Resolutions were adopted in regard to the death of Dr. J. M. Bash, who had been a faithful member of the society.

Adjourned.

C. NORMAN HOWARD, Sec.

LAKE COUNTY.

The Lake County Medical Society met in regular session in Indiana Harbor March 4. Applications were read from Drs. Varble, Miltimore and Long, and being favorably reported by the Board of Censors, they were elected to membership in the society.

Typhoid Fever was the title of a paper by Dr. J. H. Gilpin, of Fort Wayne, in which the author discussed the clinical history and treatment. In his opinion, the use of salol, beta-naphthol, boracic acid, and the other intestinal antiseptics are of doubtful utility, though they do no harm. Continued purging is bad for the patient. The tub bath is the best means for employing hydrotherapy. Hemorrhage and perforation call for absolute rest, the application of ice bags, etc., and is usually fatal. Operative measures the only treatment.

Dr. Oberlin of Hammond opened the discussion by saying that some cases might easily be confused with appendicitis, and recalled two cases that were operated for appendicitis, later running a typical typhoid course. This may have been due to an ulcer in the region of the

appendix. Dr. Oberlin gives more credit to hydrotherapy than to other remedial measures. He reported one case, the duration of which was from March to September, and having had twenty-eight hemorrhages. He used in the treatment of this complication a saturated solution of gelatin, a tablespoonful every two hours.

Dr. Shanklin reported having seen typical cases of acute purulent otitis media as a complication of typhoid, usually occurring in the more severe types of the disease.

Dr. Evans disagreed with Dr. Gilpin regarding the Brand bath treatment, as he had given ninety-nine baths to a patient and was of the opinion that the patient would have died had he been given the other one. Dr. Evans reported having used guaiacol, twenty drops in the abdomen, which was followed by a drop of temperature to 97. The doctor thinks this was due to a too long continued application of the drug.

Dr. Howat reported endocarditis and synovitis as somewhat frequent complications. In his experience 60 to 75 per cent. show roseola. The Widal test is a positive reaction in some cases where the roseola are not present. He likes the use of ice cream rather than too much milk feeding.

Dr. Gilpin closed the discussion.

Adjournd.

E. M. SHANKLIN, Sec.

LAWRENCE COUNTY.

The Lawrence County Medical Society met in regular session March 4 at Bedford, with President F. E. Stipp in the chair. Minutes of previous meeting read and approved.

On the motion of Dr. Emery the following program was arranged for the next two meetings: For April, "Care of Infants," Dr. Claude Dollens; "Renal Calculi," Dr. W. C. Sherwood; "Cystitis," Dr. G. W. Walls (since deceased). For May, "Organic Heart Diseases," Dr. E. E. Mitchell; "Otitis Media," Dr. J. C. Kelly, and "Treatment of Exophthalmic Goiter," Dr. A. J. McDonald.

By unanimous vote Dr. A. J. McDonald was elected alternate to the State Medical Association for two years.

Dr. Claude Dollens talked on the subject of the various religious cults, and their care of the sick, speaking of his observations locally in his community. He said he thought that some of the patients who had been treated simply by prayer, and other purely religious methods, had been neglected, and should have had medical treatment. Dr. Dollens said that quite a few births occurred, as well as an occasional death, when no physician is called. He has often wondered if the usual birth return or death certificate is always made out by religious attendants in such cases. Discussion.

Dr. Emery reported a case of corneal ulcer, of traumatic origin, in a woman, caused by dropping the comb in her eye while she was combing her hair. Iritis followed. Treatment consisted in hot applications, and instillation of atropin solution. He never employs morphin or opium in any form for pain of iritis; phenacetin and aspirin, or the salicylates in some form being preferred.

Dr. E. L. Perkins reported a case of uremia in a female patient, 67 years of age, who was seized rather suddenly with great difficulty of breathing, which, in some respects, suggested asthma. At first an abundance of urine was voided; pulse full and of good volume;

pain over sternum; temporary blindness, with transient paralysis and no fever. After a few days exertion of urine almost ceased; odor of breath became very foul. Patient placed on digitalis, with diuretics and cathartics. The dyspnea became less and the elimination of urine more profuse, but the patient died within a few days of uremic coma.

Dr. Schrum reported a case of uridrosis in a man aged 46, laborer, and at times a hard drinker. Patient presented himself while recovering from a spree; during past week had voided but a small amount of urine. Organic disease of the kidneys suspected, but no urine could be obtained for examination. Treatment, warm cleansing bath, followed by boric acid lotion and ointment of zinc ointment. Alcohol interdicted.

Adjourned.

RILEY SHRUM, Sec.

MARSHALL COUNTY.

The Marshall County Medical Society held its thirty-first annual meeting in the city hall, Plymouth, Ind., March 18. The meeting, from a standpoint of interest shown, excellence of program and attendance, was probably the best meeting in the history of the County Society.

The meeting was called to order by the president, Dr. A. C. Holtzendorff, at 1:30 p. m. Dr. C. A. Daugherty presented an excellent paper on "Movable Kidney," which was discussed by Dr. Miles F. Porter of Ft. Wayne, Dr. H. H. Martin of Laporte and Dr. T. A. Burton of Plymouth.

Dr. Robert H. Babcock of Chicago gave an exceedingly interesting and instructive talk on "Influence of Chronic Abdominal and Pelvic Disease on the Heart." A number of the Doctor's own cases were related showing the relationship of cholecystitis, appendicitis, pelvic disease and other abdominal lesions as etiological factors in organic and functional heart disease. The presentation of the subject and the very able discussions by Dr. G. W. McCaskey of Ft. Wayne and Dr. J. B. Berteling of South Bend brought out many obscure and valuable points in this connection.

Dr. A. C. McDonald's subject, "Gleaning from Obstetrical Practice," was in part a history of the Doctor's own cases for a number of years, in which most of the accidents and abnormalities of child birth had been encountered—and giving the manner of an up to date obstetrician's dealing with them. Discussions by Drs. Loring and Stevens of Plymouth and Edison of Bourbon.

Dr. Porter's paper on "Surgical Treatment of Epilepsy" was a plea for the early recognition of symptoms of this disease and immediate operation before the epileptic habit or tendency could be formed. He also emphatically advocated the substitution of Cesarean section for high forcep delivery in cases of contracted pelvis, as 17 per cent. of epileptics and idiots are caused by injury to the cranium incurred in these cases. The paper was discussed by Dr. McCaskey.

Dr. A. E. Bulson, Jr., of Ft. Wayne, read a paper on "What the General Practitioner Should Know About Abscess of Middle Ear and Mastoid Cells." The paper was a masterly review of the subject and brought out clearly the importance of the early recognition of middle ear involvement and its prompt treatment by incision of the drum membrane and drainage. Involvement of the mastoid cells should be met by prompt

and early radical operation. The paper was ably discussed by Dr. E. J. Lent of South Bend.

Owing to the shortness of the time available discussions of all papers were somewhat limited.

Immediately following the program, members of the profession were tendered a banquet at Van Curen's Cafe.

At the evening session matters of business were taken up. The society voted to change the number of meetings from quarterly to monthly, and henceforth meetings of the Marshall County Medical Society will be held at 1:30 p. m. on the last Thursday of every month. The following resolution was presented and by motion adopted by the society:

WHEREAS, There have been reports that certain person or persons have been practicing medicine in Marshall county without a license, and also that person or persons have obtained a license by illegal means; therefore be it

Resolved, That a committee of three be appointed by the president to investigate the reports or charges, and in this investigation to notify the person or persons about whom these reports or charges have been made to appear before the committee and give such information relative to the matter as they possess. After this committee has duly investigated all reports and charges they are to report to the secretary of this society, and if their report finds that any of these reports or charges are true, then upon such report the secretary is hereby directed to file such legal papers before the State Board of Registration and Examination, as they require, to bring it before said board for final legal adjudication.

The following committee was appointed: Dr. S. C. Loring, Dr. L. D. Ely and Dr. J. W. Edison.

A fee bill fixing charges for services of physicians in Marshall county similar to that in force in the surrounding counties was adopted. The physicians of Plymouth have organized for post-graduate work and study and for their mutual advancement and protection. The meetings are held every Tuesday evening, and it was urged that all members of the society in the county take up the work and cooperate with the Plymouth physicians. Three new members were added to the society.

The meeting then adjourned. H. P. PRESTON, Sec.

NEWTON COUNTY.

The Newton County Medical Society met in regular session March 16 and elected the following officers: President, T. E. Collier; vice-president, John G. Kinne man; secretary-treasurer, Frank Kennedy.

Adjourned. FRANK KENNEDY, Sec.

PORTER COUNTY.

The Porter County Medical Society met in monthly session March 2. Minutes of previous meeting read and approved.

"Exophthalmic Goitre" was the title of the paper of the day, by Dr. R. D. Blount of Valparaiso. Summing up his remarks, he advised his hearers to try medical treatment first in all cases and only resort to surgery when other means fail. Quinin hydrobromate and ergotin were the drugs advised for trial. In the discussion, iodin, iodids, thyroidectin, electricity and

rest, were suggested, and all agreed that the initial treatment should be medical with one exception. Dr. Loring affirmed his belief that all cases were surgical from the beginning.

Adjourned.

G. R. DOUGLAS, Sec.

BOOK REVIEWS

CONSUMPTION. Its Prevention and Cure Without Medicine, etc. By Chas. H. Stanley Davis, M.D., Ph.D. Second edition, enlarged. Cloth, pp. 218. Price \$1.00 net. E. B. Treat & Co., New York, 1908.

Although written for the lay mind, this work is evidently not intended to supplant medical advice, but rather to aid in the education so essential to the proper care of tuberculous patients and the prevention of the disease. An abundance of information and wholesome advice concerning the great white plague is here offered the layman that makes this little work well worth a place on the shelves of any man's library.

PROGRESSIVE MEDICINE. Volume 3. September, 1908. Edited by Hobart A. Hare, M.D., assisted by H. R. M. Landis, M.D. Paper, pp. 293. Lea & Febiger, Philadelphia and New York.

This volume is taken up with a study of the diseases of the thorax and its viscera, including the heart, lungs and blood vessels, by William Ewart; dermatology and syphilis, by William S. Gottheil; obstetrics, by Edward P. Davis, and diseases of the nervous system, by William G. Spiller.

Ringer's conclusions regarding tuberculin therapy are accepted as most logical. Indeed, the whole subject of tuberculosis as treated in this section is most interesting, as is Dr. Davis' section on obstetrics.

A few unfortunate typographical errors have crept in, as the word "infection" for "injection" on page 142.

The volume is well indexed.

PAIN; ITS CAUSATION AND DIAGNOSTIC SIGNIFICANCE IN INTERNAL DISEASES. By Dr. Rudolph Schmidt, M.D., Assistant in Von Neusser's Clinic, Vienna. Translated and edited by Karl Vogel, M.D., Instructor in Pathology, College of Physicians and Surgeons, Columbia University, etc.; and Hans Zinsser, A.M., M.D., Instructor in Bacteriology, College of Physicians and Surgeons, Columbia University, etc. Cloth, 326 pp. Price, \$3.00 net. 1908. J. B. Lippincott Co., Philadelphia and London.

As is indicated in the title, this volume treats of the symptoms of pain, its causation and diagnostic relation to disease, although much more of symptomatology is considered than pain alone. The regional and topographic manifestations are taken up mostly with a discussion of diseases of the intra-thoracic and abdominal organs, and many useful diagnostic hints are added to the work other than those indicated by the title *per se*. The volume ends with a series of Head's charts on cutaneous hyperalgesia which are recognized as the most complete that have as yet been produced.

Exception might be taken to the impression that is created that diarrhea is a rather more common precedent of acute appendicitis than otherwise, and throughout the treatise the promiscuous use of the term "temperature" for "rise of temperature" or "fever" occurs, a confusion of terms that no longer has a place in scientific medical nomenclature.

APPENDICITIS AND OTHER DISEASES OF THE VERMIFORM APPENDIX. By Howard A. Kelly, M.D., with 215 original illustrations, some in colors, and 3 lithographic plates; 502 pages. J. B. Lippincott Company, publishers, Philadelphia, Pa. Price, \$6.00.

This is the second edition, and in the brief preface the object of the book is thus set forth: "A compact résumé, dwelling with special care on the practical side of the subject, would better meet the needs of the great army of general surgeons throughout the country." The author has given us a book that should be on the shelf of every surgeon and progressive practitioner. To have one book containing all the essential facts about the appendix is a boon to the whole profession. The descriptions are clear and indications for operative measures for the most part satisfactorily set forth. The illustrations are apt and are unusually well executed, and are of great value in elucidating the text. The chapters on history, anatomy and physiology are complete, containing all the essential facts, and at the same time not too prolix. The chapter on bacteriology, by Dr. Wm. A. Ford, reviews briefly the work done in this branch, and informs us that at Johns Hopkins, in a hundred cases taken at random, bacillus coli is found in 86 cases, and streptococcus in 16, which he thinks is about the average.

Acute appendicitis, subacute and chronic appendicitis, peritonitis and metastatic affections are fully discussed and clearly illustrated. The pathology of these affections is fully considered. The lithographic plates are works of art. The practitioner or surgeon will find, in the four chapters devoted to this part of the subject, everything he could desire.

Disorders of digestion are regarded as the chief exciting cause. Foreign bodies play a small rôle; in Johns Hopkins four were found in one thousand cases. Heavy objects like shot and bullets and pins are commonest. Fecal concretions are common, but percentage is not stated.

The clinical history, with complications, is given in detail, every symptom being clearly and fully discussed, but Chapter XI, on Diagnosis, is one of chief interest. This chapter is very full, but the salient points are emphasized so that this can be seen by scanning the text: "In the presence of the cardinal symptoms, namely Sudden, Acute Abdominal Pain, Tenderness on Pressure Over or Near McBurney's Point, and Localized Muscular Rigidity, the diagnosis of appendicitis is justified in the majority of cases." If every practitioner could have this sentence sink into his gray matter it would be worth to him many times the price of the book. The knowledge of rare and unusual deviations from this clinical picture seems to be firmly fixed in the practitioner's mind, and makes him hesitate at times when life depends upon an early decision.

In addition to the usual methods of examination, an instrument called the "Piezometer" is given to measure the amount of pressure over the appendix which causes pain, but one will hardly expect it to come into general use. The differentiation between acute appendicitis and other diseases is very fully discussed, but the possibility of mistaking tubercular kidney for appendicitis, not an uncommon error, is not mentioned. The diagnosis of chronic appendicitis should be more fully considered. The chapter on leucocytes in appendicitis shows that a leucocyte count is of importance in acute cases. Too much space is given to appendicitis

of the youth, much of the chapter being a repetition of what has been fully stated in other chapters.

The chapter on appendicitis and typhoid fever is contributed by Dr. J. Erlanger, in which the relations are fully discussed and the following is given as the indications for operation: "In cases of suspected appendicitis, with an alternative diagnosis of typhoid fever, the wisest course is to wait. The best general rule is not to operate for appendicitis in the early stages of the fever, say up to about the tenth day. In the absence of exceedingly urgent symptoms, give the patient the benefit of the doubt and wait and watch closely." . . . "Typhoid appendicitis should not be operated on unless there is perforation."

The author defines early operations, those done at the onset, which is the ideal time; intermediate, those performed from the second to the fifth day; late, those performed after an abscess has formed; interval operations, those between attacks. Surgeons agree on the procedure in all but the intermediate operations. The author advises operation unless the patient is distinctly improving, and even in these cases he reminds us, "It is of the utmost importance to remember in such cases that the most marked signs of improvement may be entirely illusory." After all, the practitioner is left but little comfort in waiting in any case. There is little doubt in the mind of most surgeons that there are many, even bad cases, from the second to the fifth day, whose chances for recovery are better without an operation, and who would direct that only those cases distinctly growing worse should be operated on. Under desperate cases, discussing the decision to operate, we find "this question must always be answered in the affirmative unless the patient is moribund." It would have been well to add simple incision to relieve pressure without removal unless it could be quickly done; in other words, as little surgery as possible is best for these cases.

The technique of the operation is fully given. Various incisions and methods of dealing with the stump are described. The author prefers the McBurney or gridiron incision for interval cases and the vertical incision through the right linea semilunaris in pus cases or drainage cases, in the latter making a second incision if necessary. In ordinary cases the author removes the appendix by the thermocautery and inverts the stump. When the appendix is so held by adhesions as to make its removal hazardous he cuts through the serous coats and strips out the mucosa.

Abscesses in the neighborhood of the appendix are satisfactorily considered in Chapter XVIII, including description and direction for operation, and point of attack. The chapter on peritonitis is also fully up to the standard, as are also those of tuberculosis and neoplasm of the appendix.

The author does not approve of hurrying the patient after operation, as has been the fashion of late. He says, "If convalescence proceeds uninterruptedly after this manner the patient may rise from bed in two weeks, but he is wiser if he consents to stay there for three; then for a few days, if the weather permits, he should be wheeled in a rolling chair into the fresh air; a little later still he takes a few steps, and so, in five or six weeks he dispenses with nurses and doctors and is able once more to care for himself."

It is a pity that a book so well conceived and written, and a model of the bookmaker's art, should have so meagre an index.

THE JOURNAL *OF THE* **INDIANA STATE MEDICAL ASSOCIATION**

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ORIGINAL ARTICLES

"RUBBERING IN EUROPE."*

L. F. SCHMAUSS, M.D.
ALEXANDRIA, IND.

During a recent conversation with the secretary of this society, he asked me to read to you a paper, comparing the German and American methods of medical instruction, especially to give an honest opinion as to the amount of benefit that can be derived from a European trip by a person not being a German or French scholar. When, therefore, I received the program and found the title of my paper to be "Rubbering in Europe" I was somewhat perplexed; still I must admit that the designation is a fitting one, because, in order to get our money's worth there, in many instances, we have to do some "stretching"; for instance, to see Prof. E. Fuchs operate with a dozen or more Americans (particularly if South Americans are among them) lined around the table where there is only room for half a dozen to see well; again, where twelve or more are taken into a course where there should be only six or eight, we have to exert ourselves—demand our rights, and this is one instance where the student who can not speak German is at a disadvantage.

Right here I may dispose of the question whether any one not speaking German will derive any decided benefit of a European trip. This must be answered in the affirmative. The trip will broaden his or her views. He or she will find that the United States is not the only country on earth, although an exceedingly important part thereof. There are methods and things there which we could and many times have copied

with profit. There is also the best of opportunity to learn the German language; instructors can be found in any of the centers. Last, but not least, the non-German speaking American can see, and, if he is a good observer, will in that way obtain considerable benefit—I should say about one-fourth of the total; he will derive another fourth through Latin and familiar terms and through German-speaking colleagues. However, he will undoubtedly lose 50 per cent. of the total benefit because he does not understand most of what is explained about the subject under consideration. Under most favorable circumstances this may be reduced another 25 per cent. by taking some of the courses given in English, but this has the serious drawback that such opportunities are limited, are not always the best and can not be depended on. It is, therefore, self-evident that any one intending to take a postgraduate course at any of the European clinics ought to first familiarize himself with the German language. But this is easier said than done. I did not include French, because this is of less importance to the medical student. In a number of letters written from Paris by men who had studied in Berlin or Vienna, it was stated, without exception, that the French opportunities do not at all compare with the German—not even in the branches for which Paris had been recommended. They advised to stay away from there, except for seeing the city and for having a "good time."

Comparing the German methods of instruction and opportunities with our own, it must be stated beforehand that comparison can only be made with our best medical schools; the average would not stand comparison at all. In doing so it must be admitted, although we have made great progress during the last fifteen or twenty years, especially in the line of surgery, that we are still

* Read before the Eighth District Medical Society at Portland, Ind., April 16, 1908.

lacking and handicapped in some important respects. This is not our fault so much as that of circumstances, the conditions under which we are working. Up to the latter half of the last century our schools were, to a great extent, private institutions, handicapped by lack of capital, lack of support and with an abundance of commercial rivalry, whereas in Germany the medical schools are all state institutions, most of them founded hundreds of years ago. That both of these factors have a decided bearing must be evident to any thinking person. Most of the drawbacks of and objections to our schools have been eliminated, but there still remains, even with our best colleges, that lack of general stability and thoroughness, and particularly the large amount of clinical, bedside and postmortem instruction found in the German schools. This is especially true of internal medicine. But also in surgery and the other branches of medicine more opportunity for practical work is given. It has often, and with some justice, been remarked that "over there" they pay more attention to the corpse than to the living patient—in other words, that they neglect therapeutics in the interest of pathology. Still we must admit that a correct diagnosis is the essential part to rational therapeutics.

What has been said of general medical teaching applies with still greater force to postgraduate instruction. Here also great improvement has taken place, but much more can be and should be done. There is no reason why all reasonable demands and requirements should not be satisfied in this country. I hope the time will come when first-class and adequate postgraduate facilities covering the entire field will be furnished at home not only by private institutions (although it is my opinion that it can be and is being made a paying business), but by every first-class medical school of this country. This has been done in Europe for many years, and it can be accomplished here. Probably the first and most important step in this direction would be to divorce our public hospitals from politics and other abuses. Thus courses would be taken more frequently, with less inconvenience, less crowding and at less expense and loss of time.

The question, then, why Americans continue to go to Europe, and especially to Germany, for postgraduate work is answered by the fact of the superior facilities found there, and hence of the profit derived therefrom, but partially also because others go. The European almost to a man believes that we come to them because we have not as good teachers here and looks doubtful when we tell him that it is not so much the lack

of good men as the lack of proper facilities due to our different social and political conditions, and inform him that we have just as good surgeons; that, for instance, we have a town of seven thousand inhabitants with a surgical clinic second to none in the world.

Before closing I wish to give a few hints to those intending to go abroad. The question when to go can be disposed of by the statement that the time to go—provided we can afford to go—is when we can best get off and when we feel a need for further general or special information and improvement. It is best to choose the time of year when the regular university courses are given—especially from October 1 to April 1. This, as every rule, has its exceptions. Regarding probable expenses, it may be said that traveling expenses with baggage are about the same as in this country. Board and lodging has to be figured at the rate of \$30 to \$45 per month, and the cost of special courses at from 50 cents to \$4 per hour. The usual length of a course is four to six weeks and costs from \$10 to \$20. How long to stay depends upon the object; it may be given as from three months to two years. The former period at least is required for any special brushing up or for general review; six months or one semester (term) is the proper time. Besides this, two months are to be added for traveling and sightseeing. To master a specialty, from one to two years have to be devoted. From experience and observation, I can recommend systematic note-taking. Professor Hajek, in his characteristic manner, used to say, "One can put down everything, but remember nothing." Regarding text-books, I would recommend taking along compends or synopses. To carry large heavy books is a burden and considerable expense, and to get books from libraries is a nuisance, owing to the red tape, annoyance and loss of time associated therewith. I have tried both methods and know whereof I speak. A very important question to decide is where to go. When I went abroad seven years ago, I ignored this; thought it made no difference; that one place or city would offer the same opportunities as another of the same size or position. But I was soon convinced otherwise and learned that the results do not depend so much upon the place as upon the man. Therefore, if you want to learn all about gallstone disease go to Mayo-Robson or to Hans Kehr; if you want to inform yourself about hyperemia go to Professor Bier, etc. This truth is also strikingly emphasized in our country by the example of the Mayo brothers. But even then one may be disappointed, because of the fact that not all good practitioners or opera-

tors are good teachers. Regarding how to proceed after having arrived at one's destination, it may be stated that the procuring of a room (with or without board, usually without) does not differ materially from that in vogue in connection with our own schools or clinics. After being settled, the next thing to do is to inform oneself of the location of the clinics interested in and the courses to be given. To this end an official catalogue or schedule should be procured. Here the important fact, that for various reasons not all courses announced are invariably given, is apt to be overlooked, and unless guarded against decided disappointment may be experienced. For instance, in October, 1901, Professor Lorenz was in Egypt; last November he went to India, and I was again disappointed in taking a course under him. Home courses do not take place, because the required participants are not obtained. Another point to be remembered is that, while some courses are excellent, others are only good and some of questionable value. Hence inquiry and discrimination have to be exercised. It will thus be seen that our past experience or the experience of others is a valuable asset in a postgraduate trip abroad. Berlin and Vienna have American medical associations which are of considerable aid to the uninitiated. Join them.

THE PATHOLOGY OF EXOPHTHALMIC GOITER.

J. A. McDONALD, M.D.
INDIANAPOLIS, IND.

The subject under discussion is attended with a considerable difficulty and not a little dissatisfaction, since one who lacks time and opportunity for study of abundant clinical material can only hope to review the literature, and this I shall attempt to do. However, the writings on this subject are voluminous, and there is considerable discrepancy in findings and disagreement in their interpretation, so that confusion is hardly escaped in any thorough reading of the work which has been done.

The final meeting-point of all investigators at this time is at the thyroid gland. Here we find definite and fairly constant changes which are capable of a pretty reasonable interpretation, the reason for these changes and the method of their production being as yet unknown, the question resting principally between the theories that the whole affair is primarily an hypertrophy of the thyroid gland—idiopathic perhaps—or that it is the result of an infection of the gland, or that

the increased growth and activity of the gland is due to an affection of the central nervous system.

However, as Schultz says, "clinically it makes no difference whether the secretion of the gland is increased or altered, or is altered chemically as the result of changes in the blood, in the alimentary canal, or in the central nervous system, the fact remains that the removal of the growing gland does away with the symptoms, and upon failure to remove the diseased gland depends the failure to cure."

I have been especially impressed by the fact, which is also well formulated by Heineck, that exophthalmic goiter is the direct opposite of myxedema in symptomatology, in pathology and in therapeutical indications, and that the symptom-complex of exophthalmic goiter can, to a certain degree, be determined by the ingestion of large doses of thyroid gland or its various preparations.

Accepting, then, for the time being the thyrogenous theory of this disease, Heineck, Dean Lewis, McCallum, Albert Kocher and others record the following changes in the gland:

There is a primary and a secondary form of the disease. In the primary the goiter and some of the other clinical features begin coincidently.

In the secondary, an enlargement of the thyroid has already existed, whether the simple cystic goiter, adenomatous, interstitial or malignant, and upon any of these may be engrafted the clinical picture of hyperthyroidism. As to the relative frequency of the primary and secondary forms, the literature, so far as I can find, is not definite. However, the gross and microscopical features peculiar to the disease seem to be equally constant, whether making up the single picture as seen in the primary form, or found in more scattered patches in a gland already affected with cystic degeneration or new growths. More especially from McCallum's description the gross appearance is as follows:

The gland is usually enlarged, though not very greatly, and it may be normal or smaller. The superficial veins are large, and the gland is hyperemic, though on section the tissue is rather pale, hard and inelastic; it is grayish and opaque instead of having the reddish translucence of the normal, and the glairy or gelatinous, fresh cut surface is replaced by a dry, granular appearance, depending upon the amount of colloid remaining in the alveoli, and even in advanced cases the surface may be a little moist and glutinous. The surface is somewhat nodular and

rough, and fine bands of fibrous tissue traverse the glandular substance and separate it into lobules.

The change is usually diffuse throughout the gland, but one lobe may be much larger, and in some cases these alterations are present only in small patches, and must be looked for carefully, being detected by their fine grain and opacity.

Microscopically, there is found the change belonging to compensatory hypertrophy. The fibrous tissue is much more abundant than in the normal gland, dividing it into lobular masses, the alveoli being separated by a more liberal stroma than normally. The alveoli are no longer rounded and full of colloid and lined with low, cubical, epithelial cells, but are extremely irregular in size and form; they are smaller than normal, and in the central part of each lobule there are larger alveoli of very irregular outline, sending out diverticuli in every direction, and encroached upon by epithelial projections which extend into the lumen, carrying with them their own central blood supply and perivascular connective tissue; the alternation of large, irregular alveoli with small ones ranged about is said to be characteristic and results probably from diverticuli from the central cavity forming new ramifying alveoli. The epithelium becomes columnar, occupying so much space that little lumen is left, the small alveoli appearing almost solid with very little colloid. The cells are usually regular, plump, with finely granular protoplasm; the free surface is sharply marked and is sometimes slightly dome-shaped, the nucleus lying at base or free end of cell. Mitoses are frequent.

The extensive desquamation of epithelium frequently present is thought to be due to rough handling of the gland in removal, though it may be met with when this element is apparently absent, and is thought by Bloodgood to be a feature associated with very severe symptoms.

Peculiar changes in the epithelium are found in extremely severe cases—the cells are enormously swollen, practically obliterating the alveolus; they lose their columnar form, becoming shapeless, and the finely granular protoplasm takes an intense stain with eosin, the irregular nuclei staining intensely with hematoxylin; this change, however, is not uniform throughout the gland, but may be confined to small areas. The significance of this cell change is not certain, and the more frequently observed change seems to be the presence among the ordinary cells of the alveolar wall, of cells which are greatly enlarged with only scant basophilic granulations

and with enlarged and vesicular nuclei, but otherwise retaining the characteristics of normal cells.

The colloid varies greatly in different cases, but is greatly diminished in the more severe cases, and shows altered staining and refractile qualities. As McCallum says, "When the colloid is diminished one rarely fails to find severe symptoms, and when symptoms are very indefinite or in part absent it is usual to find a good deal of colloid."

It is not improbable that the amount of colloid may bear a fairly constant relation to the stage of progress of the disease. Barker says: "The symptoms of exophthalmic goiter may become superimposed upon ordinary colloid struma, in which event the thyreotoxic symptoms appear to be mitigated."

Probably more for the historical value than for any other reason, it will be well to discuss briefly the other theories of the etiology of this disease. These have been numerous, and each has had at various times its majority of supporters.

The thymus gland has been found to be hypertrophied in some cases, and some cases have been benefited by thymus gland therapy; but more generally it has been found to be useless; also exophthalmic gland hypertrophy occurs in the absence of thymus gland hypertrophy, and conversely.

That the sympathetic system is responsible for this symptom-complex was formerly believed by many able clinicians, notably Kobens, Troussseau, Oppenheimer and others. Operations upon the sympathetic nerves and cervical ganglia have been devised by Jaboulay, Poncet and Jonneseo, but, as Heineck points out, the operations have not yielded equally good results in the hands of other able operators.

Pathologic changes have been described in the sympathetic nerve and ganglia, but these are not constant nor characteristic, and it may be briefly stated that no constant or pathognomonic change has been found in systematic examination of the peripheral nerves or of the central nervous system.

It would occupy too much time here to describe the experimental studies in restiform-body lesions. Certain lesions of the parathyroid glands described in some cases have not been constantly found, and parathyroid therapy is said to be useless.

The cardiac theory, i. e., that this disease originates in the heart, is not tenable, since the same cardiac nervous phenomena with secondary compensatory changes occur in other toxic cardiac

affections, and "the cure of the exophthalmic goiter does not cure the other coexisting organic cardiac lesions" (Heineck).

The compression theory is disposed of by such a man as Frederick Mueller as follows: "I can not agree with those authors who distinguish special types of goiter heart supposedly due to mechanical pressure by an enlarged gland on the vagus or sympathetic." Rather he believes the goiter heart to be an entity and to be due to an excessive formation and absorption of the secretion of the thyroid.

It would seem, then, from the foregoing rather cursory analysis of the literature, that the symptoms of exophthalmic goiter are due to the excessive activity of a thyroid gland, which is to a greater or less degree the seat of certain characteristic changes which are indistinguishable from hypertrophy, and which, when compared with the hypertrophy produced experimentally in dogs by means of partial thyroidectomy studied independently by Halstead and Horsley, are found to be identical.

The questions follow (1) Why should the process of hypertrophic compensation, which is elsewhere a beneficent and reparative function, here so far overstep its authority as to produce a symptom-complex which is certainly pathologic? and (2) What is the ultimate cause of this over-stimulation?

The answer to each question must for the present be largely speculative. Regarding the first, Dr. Jewett V. Reed, in a paper before the Indiana State Medical Association in 1906, shrewdly compares the overproduction of immune bodies in the sera of convalescents from infectious diseases with excessive callus formation, profuse granulation, scars and adhesions as demonstrating that compensation does elsewhere over-reproduce, and I am inclined to think that this over-compensation, if such it prove to be, is in response to the continued action of certain toxins or stimulation bodies, however produced, and this brings us to our second question as to the ultimate cause.

McCallum (W. B.) suggests that the underlying cause is an infection of some type, e. g., influenza, which may have reached the thyroid through the upper respiratory tract, setting up a non-suppurative thyroiditis; such a history often is found in these cases. Reed cites a case seen with Dr. H. C. Sharp at the Indiana Reformatory, in which, one month following an infected varicocele operation, there appeared thyroid enlargement and pressure, dyspnea; three months from onset the right lobe of the thyroid was re-

moved, and upon section showed the picture of early hypertrophy. It is interesting to speculate as to whether a latent exophthalmic goiter might not have become manifest if this patient had been given a brief course of iodothyroin or thyroid extract.

Reed further cites Roger and Garnier as reporting thyroid parenchymatous hypertrophy during or following scarlatina, diphtheria, typhoid fever, cerebrospinal meningitis, measles, smallpox, purulent peritonitis and tuberculosis. It is to be hoped that in the future all such cases will be studied by the administration of small doses of thyroid gland in order to develop a latent Graves' disease. A case which I have had under observation for some months has a preceding history of long and severe typhoid fever.

No time remains for even touching on the vast amount of research work that has been done on the physiological chemistry of the thyroid gland. We are very much in need of conclusive information regarding the physiology, and until this has been established very little accurate work in exophthalmic goiter therapy can be hoped for. Those interested in this subject should follow the rather remarkable work of S. P. Beebe, who has published excellent articles on this subject. He is inclined to believe that the function of the thyroid gland may be a detoxicating one, but does not believe that this is accomplished by the direct union of the thyroid secretion with a metabolic toxin, but is inclined rather to believe this function is accomplished by a stimulating and regulating effect which is exercised upon other viscera. He does not agree with Blum, who thinks the function of the thyroid is that of detoxication, which by iodizing a toxic albumin arising in the course of metabolism renders it harmless, the colloid being the excretory product, and the more perfectly it is iodized the less toxic does it become, and according to whose theory the symptoms of exophthalmic goiter are caused by the escape into the circulation of large quantities of this partially iodized protein.

Based on the present knowledge of thyroid physiology, the results so far obtained by Rogers and Beebe in the use of their serum give us fair encouragement to hope that in the not very distant future this disease may be added to the list to be conquered by the internist, whereas at present practically every case should be referred to the surgeon, unless a rather brief period of more conservative treatment has shown unmistakable improvement.

OUTLINES ON THE EVOLUTION OF PSYCHOPATHIES.*

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Definition of Psychopathies: Individuals are born with certain capacities and tendencies, and the effects of errors in their further development, resulting in incompatibility of individual and environment, constitute the psychopathies.¹

TROPISM.

In the lower forms of animal life their activities are known as tropism, and are purely automatic. Automatic activities are manifested reactions to the appetites, gustatory and reproductive, and the elements in which the creature lives.

Moths fly toward the light, not because they want to go to it, but because the action of the light waves upon their nervous system automatically brings about their approach to it. These actions are inherent in the individual, and are not affected or modified during the life of the individual. The individual learns absolutely nothing from experience. In a higher form, birds and the like, there are inborn desires—the so-called instinctive activities; latent capacities for action; the inheritance of the results of all past experiences of ancestors.

DEVELOPMENT OF LATENT CAPACITIES.

That these latent capacities or inherent desires may fulfill their purposes, and their resulting activities operate for the good of the individual and his kind, they must be developed; in the lower forms of life, by experience and imitation, and, too, in higher forms, by volition and education. And, further, they may be modified by individual experience and transmitted in modified form. Imitation springs from consciousness of kind; hence the importance of superior ideals.

INCREASE OF BRAIN SUBSTANCE.

When as a result of brain development man was able to cause material to ignite and burn, his passage from the purely natural to an artificial existence was begun. An increased amount of gray matter provides for greater desires, more varied activities, and for extended personal experiences. In the last analysis desire is an incentive to action, arising from physical conditions of the brain cells.

When cells are properly and fully exercised by the stimulus of wholesome experiences, individual and historical, there is healthy physical expression, modification, and transmission. With development of the frontal lobes and limited individual experience, imagination becomes correspondingly active.

Imagination-mental excrecence, or incubus, therefore emotionalism, is greatest in brains of large mental capacity and small experience, as in children, and those men who are but children grown.

Emotionalism is, and vocalization may be, the vicarious expression of inhibited or ungratified innate desires, the true expression of innate desires being inhibited by the dictates of society and environment.

Will-power is brought into use when we "try," and, through fear and education, it is exercised chiefly in inhibiting or perverting the natural expression of desires, and in the gratification of wants and wishes sanctioned by custom.

Needs and desires are to be distinguished from wants and wishes, as the latter spring from the imagination.

BASIS OF MENTAL DISEASE.

When ideals of the imagination were substituted for actual experience as guides of life, and for educational purposes, the foundations for mental diseases, hospitals for the insane, and penal institutions for the antisocial were laid.

HEREDITY. INTELLIGENCE.

It is evident that the leaders of early society were largely dominated by imagination, and that their influence in human affairs has been preserved, and to this day exists in modified form, even in the learned professions.

The mass of people have acted but a passive part in history, and in the development and practice of law, theology, and medicine; but have accepted or at least pretended to accept their mandates as final. Those individuals who protested were, in the name of law and theology, promptly silenced. Thus the happy combination of courage and altruism have been largely denied to posterity. Man's inherited intellectual capacity is definitely indicated by frontal development, his actual intelligence depending on mental acumen, integrity of cerebral structure, amount and sort of experience, and his formal education.

LACK OF ADAPTABILITY.

Some one has said that the trouble with the people is a lack of adaptability. If human af-

* Read before the Wayne County Medical Society at Richmond, Ind., Sept. 4, 1907.

1. Mental disturbances due to bodily disease and congenital defects are not included.

fairs were more perfect this lack of adaptability would be of less importance. But in the present imperfect condition of human institutions, the lack of adaptability or loss of cerebral accommodation, not only limits the activities of life, but is a very potent factor in the development of psychopathies.

FIRMNESS.

Whether firmness operates for or against mental health of individuals depends on the sort of ideals entertained. Firmness is an inherited quality, its unwholesome manifestations are often intensified by the attitude of pedagogical individuals, sane or insane, whose limited experiences do not balance the mental effects of heredity and imagination.

PERVERSION.

The combination of selfishness, combativeness and perceptiveness, with a marked deficiency of altruistic sentiments, is the inheritance of a comparatively few persons, but these few have prostituted law, theology, medicine and business institutions, and have employed them as instruments to subjugate, coerce and exploit the more conscientious and benevolent, though more credulous, people, as illustrated by Machiavelli (A. D. 1514) in "The Prince."

Fiction, whose characters are perverted or idiotic creatures; historians' eulogies of imbecile or insane notables, pseudoscientific literature, crazy creeds, scare headlines, and political thunder are all largely the product of imagination, and, too, are powerful influences in the process of perverting mentality.

As the well-balanced mind is seldom, if ever, responsible for extraordinary or abnormal conditions, it is evident that the selfish, authoritative, and the pedantic imaginative minds are responsible for the perversion of credulous individuals (we are all more or less credulous) and the prostitution of social, political, religious, industrial and business institutions.

INFLUENCE.

Health of body and mind of individuals, and the benefits of institutions of civilization depend on the integrity and development of the frontal lobes and their proper functioning. Perfect function depends not alone on the perfect organ, but on a perfect surrounding condition, as well. The more delicate, highly organized, or unstable an organ, the more readily will it be disturbed by unfavorable surroundings and the influence of perverted institutions. As we develop mentally by healthy cerebral stimulation,

without cerebral stimulation, there is stasis if not decline. With unwholesome stimulation there is mental perversion, followed by acts unconsciously antisocial.

DECEPTION.

Egotism prevails, the spirit of altruism having for ages been silenced by terror and taxation. Who will dare point with pride at his ancestry and declare himself free from psychopathic tendencies? And who, in response to environment, does not add to his sad inheritance and to that of posterity by quibbling, prevarication, exaggeration, dissimulation and hypocrisy?

DEVELOPMENT OF PSYCHOPATHIES.

Man's inhumanity to man breeds deception. Deception is employed by selfish ambition, and also as a means of self-preservation.

In the present stage of social, political and industrial evolution, material advantage may be gained by the practice of deception, but deception is practiced at the expense of mental health, as every act reacts on and modifies the mentality of the individual. And accordingly as facts, principles and proper relations of man to man are sacrificed to the selfish sentiments and propensities, the hysterical condition develops.

The hysterical condition may not be exhibited while the sentiments and propensities are being gratified, but opposition will excite its active manifestations. Failure to realize is a serious matter with the selfish and leads to discouragement, and at times to violent action and criminal offenses.

Disappointment and discouragement occur just in proportion as individuals are ignorant of or disregard the proper relationship of all men, or, better, of all animal kind, and, too, as they embrace the works of imagination as standards of life. As discouragement for any cause supervenes, hope vanishes, spirit is lost, and the resulting mental state is expressed in conditions known as neurasthenia, hypochondriasis and melancholia.

MENTAL HEALTH.

Now, if there is anything wrong with an individual it is congenital or acquired, nothing more. Selfish desires are common to all. Altruistic desires are generally deficient and often absent. When these sentiments balance the golden rule is observed and psychopathies do not exist.

Psychopathies will continue so long as the selfish sentiments predominate, ideals of the imagination control; deception is practiced for

pleasure and profit; will-power is directed to the gratification of wants and wishes rather than the inhibition of selfish activities and the improvement of social conditions; the individual is ignorant of or indifferent to the requirements of a sound social system, and from want of courage he fails to secure his just dues, or from the want of benevolence he desires more. In a word, mental health may be said to exist when the individual appreciates the importance of proper relations of man to man, and his inherent desires give rise to activities which are directed toward perfecting human relationship and making rational standards of life universal.

BALANCED EGOTISM AND ALTRUISM.

Ideal ethics may be altruistic, but twentieth-century ethics demand a conservative use of both egoism and altruism. Egoism is animalism and is of the low-browed past; in this age its fulness leads to jails and asylums. Altruism proceeds from the frontal lobes and indicates the future; in the present stage of evolution, its extreme leads to poverty and the almshouse. While excessive egoism is pernicious, selfish sentiments and propensities are absolutely essential for the individual's welfare. They operate in self-preservation, and in times of stress the egoist is best fitted to survive physically. Through egoism life is preserved, species perpetuated and success in material things achieved.

Egoism is not a defect, and it becomes injurious to the individual and his associates only when acting in excess, or when it is deficient as compared to the activities of altruistic sentiments. As the struggle for existence modifies, so must the egoistic and altruistic propensities and sentiments modify if mental health is to be maintained.

Whatever may be the degree of mental balance, it will be modified by time, influence and experience, and their resulting events as accident, disease, education, intoxication, exhaustion, anxiety, discontent, disappointment, worry, grief and the like. This modification is expressed in correspondingly altered activities. If man is responsible for the results of his energy, either to his Maker or to his fellow-man, it is because he is endowed with reasoning faculties, and it is by exercise of his reasoning powers that the balance of egoism and altruism is secured and mental health preserved.

THE POWER OF DESIRE.

It has been said man is largely the creature of circumstances. Unless man earnestly desires it to be otherwise, he is wholly the creature of

circumstances. Few men are born with that cerebral state that gives rise to the desire to be a nobler creature—that is, further advanced in the process of evolution. It would seem that such desire is not of spontaneous origin, but that it is created, and just so much as a man desires to be a nobler being, just so much is he a rational being; and with the degree of vigor that a man desires to be noble will he grow noble, even in a pernicious environment, and will he cease to be wholly a creature of circumstances.

If men desired to be noble, rational beings as vigorously as they desire to gratify without limit, their sentiments of self-esteem and love of approbation, psychopathies would be the exception and not the rule.

RÉSUMÉ.

Selfishness dominates the animal, the child, and primitive people. Along with the development of the frontal lobes the capacity for benevolence increases. Thus in the process of evolution the egoistic and the altruistic faculties become equally developed, and in time the benevolent sentiments predominate.

The present civilization is the borderline age. In normally approaching this period of mental evolution there should be no psychic disturbance or irregularity. But on account of inherent and acquired prejudices and fears, man adheres tenaciously to outgrown and antiquated ideas; while, on the other hand, and for much the same reasons, with indolence added, he fails to fully exercise his more recently acquired faculties. Therefore, his activities proceed largely from a mentality belonging to a more remote period, and are not in harmony with his advanced cerebral development. Thus the phenomena of an altruistic brain dominated by egoistic desires, with the accompanying incongruities and discords of the psychic life.

In brief, the situation to-day with the majority of men and women is an unfinished brain in which still more primitive ideas and desires hold sway. And herein is found the key to an understanding of the nature, cause and cure of all mental (not cerebral) disorders.

Man may influence the progress of mental evolution. And to-day if the existing frontal lobes were properly and fully exercised, human affairs would advance to where they belong, and that is ages into, what to us now is, the future. (That men live away behind their capacity is well illustrated by the events associated with 1776.)

But retard progress as we may, in time, through evolution alone, the higher centers will control the acts of men. Then "the truth shall make you free," and psychopathies will be no more.

RACE SUICIDE FROM THE PHYSICIAN'S VIEW POINT.*

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All medical questions are social questions, and all social questions, in their last analysis, become moral questions. In discussing the subject assigned, this paper will deal with causes and their consequences, with some curative or preventive suggestions, rather than a mere discussion of its gross symptomatology. Race suicide from any standpoint must appeal to our most earnest consideration and treatment.

If by race suicide, however, is implied race extinction, then we have little to fear; for while human passion remains the all-potent power it is and has been (and we have no evidence of its waning) fecundity *per se* is not in jeopardy. But if by race suicide is meant race deterioration, through degenerative processes, so apparent, yet so menacing as to threaten our entire racial and social status, then, indeed, have we cause for alarm.

Statistics show that the earth's population has never increased more rapidly than during the past fifty years, and that the population of the United States has increased almost 200 per cent. during the past half century (while crime has increased over 400 per cent. in the same time). But when we consider the source of that increase, and its effects upon our civilization, the question of race suicide may well give us pause. Not only does the birth rate of our indigent, ignorant, diseased and criminal class increase disproportionately to that of the physically, mentally and morally sound and financially independent, but we must include that vast army of immigrants (both Asiatic and European, over a million a year), a large per cent. of whom are physical, moral and financial paupers, if not dangerous criminals. The alien criminal interprets liberty as synonymous with license. He finds his way to the slums of our larger cities, where his propaganda of anarchy, communism and devilism has already its strongest foothold.

The reaction of social fermentation gives rise to two processes of deterioration—effervescence and sedimentation. The social reagent is money (or in the lower stratum the struggle for existence). The precipitant of the upper stratum is froth or foam, which readily evaporates; that of the lower and heavier is dregs, with greater vitality and virility.

There can be no doubt that the demands upon modern society, with its temptations and its excesses, shortens life and robs thousands of homes of children. Indeed, it makes love, which constitutes the only true affinity, subsidiary to rank, cast and station. Never was the sacred bond of wedlock more wantonly traduced than through those contract marriages between the pseudo-aristocracy of New York and the titled libertines of Europe. The monetary loss to this country is as nothing compared to the national disgrace and moral stigma attaching to it. Such marriages, national or international, come well within the meaning of legalized prostitution. If the contracting parties only were the sufferers, little interest or sympathy need be wasted upon them. But the pity of it all is the fruits of a loveless marriage and its influence upon the rights of children, if any children there be. Little wonder it is that the degenerate type is so frequently found in those of royal or high social lineage.

Race suicide, as phrased by our worthy President, has been interpreted as a popular appeal to every married pair to "multiply and replenish the earth." It seems to have struck a responsive cord and resulted in a quickened conscience throughout the nation. It has brought the visitation of the prize stork to the home of culture and quality. It has been used as a specious plea by the indigent, whose additions are always in inverse ratio to "the fitness of things," or ability to provide for the dependents. Herein is involved, not only the rights of society, but the right of every child to be well-born and properly reared. Therefore, the President's plea needs revision or qualification.

The evil of overproduction is frequently found where the poor emulate the example of "the old woman who lived in a shoe and had so many children" because "she didn't know what to do." On the other hand, many women who, from every consideration, should assume the responsibility which marriage imposes, viz., motherhood, alas! too often do know what to do, or where to go to escape such responsibility. And it is a well-known fact that every community has its professional charlatan and criminal abortionist, who for a few paltry dollars lends himself a

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willing tool to the unwilling prospective mother. No physician of any professional standing, conscience or attainment will become *particeps criminis* to child murder for no other consideration than the reward offered. No justification for such procedure can be found save the life or health of the prospective mother, or perhaps the unborn, which is doomed to disease and early death.

Gestation is a physiologic and not a pathologic process. More women have lost their lives through criminal abortion than in birth at term, while the sacrifice of health and beauty is infinitely greater than in child bearing. Indeed, the crowning glory of woman is motherhood, and never is she quite so beautiful or so worthy the homage paid her by man as when graced by the charms of prophetic motherhood. And no woman has ever attained her highest good or happiness until she has been crowned queen of the home and won the royal title of mother. It means suffering and sacrifice, yes; but what achievement or reward has come without it? Verily, she who would save her life loses it, and she who would lose it, for motherhood, saves it more abundantly! Woman admires the heroic in man. The soldier who marches forth to battle, willing to lay his life on the altar of his country, is the special object of feminine adoration. Even greater is man's homage to the heroism of woman who lays her life on the altar of motherhood. This is why we salute her with uncovered head.

But who should become parents, and "what shall the harvest be"? The proper solution of these questions will solve the problem of our social "dregs," as found in the slum life of every city. Here where every sight, sound and odor offends is the tenement district with its cheap grogeries and red lights, around which the human moths flutter in a moral miasm, the poisonous afflvia of which penetrates, consciously or not, the entire city. Here is found misery, poverty, idleness, drunkenness, filth and disease commingling with every form of vice and crime conceivable. In this veritable cesspool of iniquity, children are born and reared, or "grow up," whose character is steeped in disease and crime long before they realize they have a character. Here are the hothouses where are bred those classic diseases—gonorrhœa, syphilis and tuberculosis. (I have referred to them in the order of their importance and prevalence.) The public is just beginning to learn something of "the great white plague," but remains in blissful ignorance of the nature and prevalence of those awful social scourges—syphilis and gonor-

rhea. This ignorance, too, is largely the fault of the medical profession. Sexology has been a subject of almost criminal neglect by the family physician. The result is that candidates for matrimony consult the spiritualist, palmist or astrologist, forgetting, as Cassius said to Brutus, "It is in ourselves and not in our stars that we are underlings."

Now a brief word as to practical remedial agencies:

First.—Abolish the public saloon.

Second.—Teach the science of sex in our public schools.

Third.—Eliminate our slum life by quarantine regulation. Expend less for punishment and more for amelioration of conditions that make for disease and crime.

Fourth.—Our laws must be revised, to the end that that industry, marriage, be protected by restrictive legislation.

Polygamy has been made a federal crime, yet in many respects it occupies advanced ground over our present marriage system. In many states there are no restrictive laws on this subject, save those defining the age of consent. The vilest courtesan, the most brazen libertine, the lowest vagabond, criminal or imbecile may marry if only the license fee be provided. Society gives sanction to and the church pronounces holy a licentious compact having for its purpose the gratification of lustful, but genic instinct, the only possible result of which is a diseased progeny. For like parent like child is the first law of genesis. To the social pathologist the whole relation and its fruition is a disease which can not be reconciled upon the ground of sentimentalism, while the race is being deteriorated. To preserve the purity of the stream its fountain head and tributaries must be safeguarded. That endless stream of children, who from birth until death are a misery to themselves and a menace to society, will, in turn, transmit their taint in an ever-widening stream until ultimate deterioration mocks our folly.

The sane and sanitary marriage offers the only prevention against the breeding of criminals and the transmission of disease. The principles of Stirpiculture (scientific breeding) must be invoked as the only rational antidote for degeneracy and its long train of evil consequences. Sterilization must be employed to prevent the reproduction of the hopeless criminal, pauper and imbecile.

Until children are conceived in rational love, rather than in lustful ignorance; until they are sought, wished for and welcomed, by parents

capable of appreciating and rearing them, the ideal race is yet to be born.

When the home becomes the harbor where love casts her anchor, marriage will become the divine institution it was intended, children will be divinely begotten, and we will have

THE EDEN TO BE.

Each newly-made home is an Eden fair;
An Adam and Eve are each mated pair.
The tree of life, in whose fragrant flower,
Unfolds the prophecy of Loves rich dower,
Becomes the poisonous upas, when the shade
Of evil knowledge doth pure love invade.
Lust is the serpent of carnal desire,
Which crawls in the dust of social mire.
It seeks, without cost, what duty must win.
(And this is the great Original Sin.)
It satiates appetite, greed and sense,
With fruit of knowledge at wisdom's expense.
It gluts the body, but impoverishes soul;
Though satisfying part, it starves the whole,
From primitive Eden, and its moral fall,
The curse of the parent, which rests upon all
The children of lust and sensual mind,
Is the curse we inherit, each after our kind.
'The Eden lost,' is but an ideal to gain,
Through loving sacrifice, labor and pain.
Ideals are like stars, which though beyond our reach,
Yet serve to inspire and, by following, teach
Us as sailors on Life's uncharted sea,
The way to the Eden that is to be.

MODERN SYPHILIS.*

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Syphilis was first described as a separate form of venereal disease in 1494, when it prevailed as an epidemic among the troops of Charles VIII before Naples. Then it spread over Italy into France, Germany and the rest of Europe. As this was immediately after the discovery of America, it has been alleged that the disease was introduced into Europe from America; it has also been claimed that it came from Africa. In fact, we have little definite information on the subject, but there is good reason for believing that the disease is much older than the above date.

This disease has been written about, talked about and discussed since its first description. It perhaps has more literature on its symptomatology than any other disease. It has, also, the distinction of having a specific treatment which has stood the finding of its etiologic factor.

It has been said that "nothing in medicine is certain," but perhaps this could be better stated

if we were to say that nothing is true in medicine until it is proven to be true, and then only true until it is proven not to be. We can only work within our understanding. Those things that are beyond are to be gained if possible, but if they can not be we must use that which we can understand, even if it is not true beyond a possible doubt. We must draw a line under the work that has been done on any subject, and from the available material draw conclusions; these are to stand for only a day, perhaps, but they are important: the object, in fact, of all work that is done on a medical object. With this understanding, I draw my conclusions.

In May, 1905, Schaudinn and Hoffman¹ published their first report of an organism which was found in eight cases of secondary syphilis. It was found in the extirpated inguinal gland in two cases and from serum obtained by puncture of the inguinal glands in six cases. This report caused the entire investigating world to proceed along the lines laid down by them. Many claims had been made in the last twenty years of the finding of a specific organism, but none have stood the test. These two workers were very modest, their only claim being that the organism was constantly present in untreated cases. This was rapidly followed by two other reports on the same subject. These were followed by reports of other workers who treated the subject in various ways, so that now, after three years, there have been more than one thousand reports published on this subject.

Syphilis is a specific, infectious, constitutional disease, characterized by a tendency to a localized deposit of various inflammatory new formations, and due to inoculation by the *Spirocheta pallida*. The *Spirocheta pallida* of Schaudinn is established to-day as firmly as any of the so-called scientific facts. It answers to Koch's postulates, except that it has not been grown on artificial media in pure culture. This, however, is the case with several accepted organisms, including the bacillus of leprosy. The *Spirocheta pallida* is not a fission fungus, but is of animal nature, an animal microparasite or protozoön of the group flagellata. The spirilla are vegetable parasites. The name of this organism should be *Treponema pallidum*, and this was the name applied to it by the International Congress of Hygiene in 1907.

The *Treponema pallidum* is a thin, corkscrew-like thread, with regular, numerous spirals, deep and close together. The pallida are the smallest of these organisms. The end of the pallidum

* Read before the Fifth District Medical Society, Terre Haute, Ind., Sept. 3, 1908.

1. Deutsche med. Wochenschr., xxxi, No. 18.

is pointed and supports a slender, straight, hair-like flagellum, and some have two at one of their poles. It is 4 to 10 microns in length, and the thickness varies from immeasurable slenderness to one-quarter of a micron. The organism is motile and two motions are described: one in which the organism rotates on its long axis and may reverse this rotation, the other a slow, undulating motion described by some as the motion while at rest. The *Treponema pallida* has been found in chancres, mucous patches, enlarged glands, condylomata, secondary eruptions, cerebrospinal fluid, sperma, gummata, various tertiary lesions and in cases of tabes and general paresis. They have been found by Neisser² in cases of hereditary syphilis, in nearly every kind of material in the body—heart, blood, kidney material, liver, ovaries, mucous secretion from the nose, etc. There seems to be a more general distribution of the virus in hereditary syphilis.

The International Congress of Hygiene, in 1907, with the exception of Siegle and his pupils, accepted the *Treponema pallida* as the etiological factor of syphilis.

Rosenberger³ reported four months' study of chancres, mucous patches, etc., and with positive findings in every case, except cerebrospinal fluid. Bab⁴ examined 53 cases of congenital syphilis, none of which lived over seven days. The organism was found in the lungs in 87.5 per cent., pancreas 80 per cent., skin, nose and eyes in from 66.7 to 25 per cent. The placenta was always free. His conception of this is, that the placenta acts as a filter, but does not take up the organism. Arning and Klein⁵ report 112 cases of chancre on the male genitals, the *pallida* being found in all but four, and two of these had been treated with mercury. In 14 female genital chancres they were found in every case. One hundred and seventy-nine cases of plaques and patches they found positive in all but 10. The organism was found in all of 17 congenital cases. Two hundred and forty-two cases of secondary papular and other lesions were examined with positive results in 235, the negative finding being due to treatment. They afterward added 200 cases to these, with about the same result. Hoffman⁶ has found the *pallida* in cases of nephritis luetica. From monkey experiments he also draws the conclusion that the blood during early syphilis is contagious, but in an attenuated

form. Finger⁷ has found the *pallida* in tertiary lesions and the sperma of syphilitics. Neisser² confirmed the finding of Finger and added that syphilis is contagious in the latent stage. This was shown by inoculations from lymphatic glands in this stage.

Monkeys can be inoculated with the virus, and Finger states that the African monkeys are more susceptible than Asiatic ones; also that the lower monkeys were only infected after deep scarification and when large amounts of the virus were used. In his experiments with the higher monkeys, the primary lesion always developed after the most superficial inoculation, and in every case this primary lesion was followed in from three to ten weeks by the secondary lesions and constitutional symptoms known to the human. In fact, there are no data that show anything but positive results, or no reports that give any reasonable excuse for not accepting the *Treponema pallida*.

Hoffman showed in his pathologic work that the *pallida*, when entering the body, first work themselves into the lymph spaces of the papilla, and from that point they go deeper into the connective tissue spaces and around the capillaries, where they multiply. He found them early in the nerves. He found in condylomata lata and in mucous patches that the *pallida* work toward the surface and make these lesions extremely infectious. Benda⁸ found, in examining sections from miliary gummatoous nodules, that the formations, resembling giant cells, are in reality agglomerations of *pallida* walled in and finally killed by an encroaching wall of leucocytes. He thinks that many of the typical syphilitic lesions have accumulations of *pallida* as a nucleus for the formation.

Fordyce⁹ says: "Summing up, then, the main features of the primary lesion, we have (1) an increase in blood vessels and consecutive changes in their walls; (2) cellular infiltration; (3) involvement of the connective tissue; (4) secondary epidermic changes."

The new diagnosis of syphilis may be divided into two laboratory findings: first, the collecting, staining and identification of the *Treponema pallida*; second, the application of the complement-deviation test for syphilitic antibodies.

To Collect and Stain.—1. All instruments and slides must be scrupulously clean. 2. Do not use antiseptic washes, but wash well with

2. Deutsche med. Wehnschr., xxxii, No. 12.

3. Am. Jour. Med. Sc., January, 1906.

4. Munchen. med. Wehnschr., xliv, No. 46.

5. Deutsche med. Wehnschr., xxxiii, No. 37.

6. Deutsche med. Wehnschr., xxxii, No. 12.

7. Wiener klin. Wehnschr., xxi, No. 1.

8. Berliner klin. Wehnschr., xliv, No. 16.

9. Jour. A. M. A., xlix, p. 263.

sterile water. 3. Scarify gently with a knife the surface of the chancre and allow blood to form in a good-sized drop. Let stand a short time until the serum is clear; then, with a loop, place serum on slide without blood corpuscles. Spread as an ordinary blood slide. Dry, protected from dust. The material may be collected by puncture of a gland. 4. Cover with fresh Giemsa's stain and stain by steaming and cooling, adding fresh stain each time and repeating the operation about three or four times. It is then rinsed with distilled water and allowed to dry, protected from dust. 5. Mount in oil and use the micro-adjustment very carefully, as the pallida take the stain very poorly, showing very pale and "pop" into and out of the field very quickly. Differentiate from others by the morphology given above. The movements of the pallida may be demonstrated by using the intersecting diaphragm, which produces the ultra-microscopic rays. This is on the same principle that we see dust particles in a ray of sunlight projected into a dark room. Morphology is, of course, impossible to demonstrate by this method.

The best method of staining tissue is perhaps the silver method of Levaditi¹¹ as follows: Small pieces of tissue about 2 mm. in thickness are hardened in formaldehyd (10 per cent.) for 24 hours and then alcohol for the same time. Wash in water for a short time. They are stained in fresh silver nitrate solution, 1.5 per cent., for three successive days, changing the solution each day. While staining a blood, temperature should be maintained and light excluded. The tissue is then placed in a 2 per cent. solution of pyrogallic acid, with the addition of 5 per cent. of formalin and allowed to remain in this for 24 hours, light being excluded. It is then passed through 85 per cent., 98 per cent. and absolute alcohol, respectively, imbedded in paraffin and cut at about 5 m. The pallida are stained black by this method.

There are two organisms likely to be confounded with the pallida. One is the *Spirocheta refringens*, which is larger, thicker and stains deeper, and the other is the spirocheta of yaws (*Frambasia tropica*), which is only found in tropical countries. The last named has been differentiated by Russell.¹²

The Complement-Deviation Test.—This phenomenon was first observed by Bordet and Gengou¹³ and was applied to syphilis by Wasser-

mann, Niesser and Bruck.¹⁴ They called attention in this article to the possibility of demonstrating syphilitic antibodies in blood serum and syphilitic tissues. Then by extensive experimental work by Wassermann and his school they found that this was not restricted to the finding of antibodies, but also to syphilitic virus.

It is a well-known fact that if you introduce the red corpuscles of one animal into another of a different species, the blood of the latter acquires the power to dissolve the blood corpuscles of the former when mixed in the test glass. This is called hemolysis. This property of immunized blood serum depends upon two substances. One is present in the blood of all animals and is termed complement. This is rendered inactive by heating the blood serum to 132° for one-half hour. The other substance, which results from the reaction of the injected animal, is called "immune body" or "amboceptor." This will stand a heat of 132° for one-half hour. If we inject an animal with dead bacteria, it has been found that after the animal has reacted the same action will take place as with the blood. The same result is obtained with the antibodies of disease, and on this last fact rests our reaction. All substances capable of producing antibodies when injected into animals are called antigen.

It is necessary to have the following substances in order to carry out the reaction: 1, As antigen, extract of liver or spleen of the syphilitic new-born; 2, as complement, guinea-pig serum; 3, as amboceptor (immune body), the serum of a rabbit which has been immunized with washed lamb's blood corpuscles; 4, a suspension of washed, defibrinated lamb's blood corpuscles; 5, the material from the suspected person to be tested, the blood serum or cerebrospinal fluid which contains or does not contain antibodies.

Mix in a test-tube definite quantities of liver extract and the suspected blood serum or cerebrospinal fluid which has been heated to 132°, and then add complement. If the suspected sample is from a syphilitic and contains antibodies, the complement will bind. To demonstrate that the complement had been bound, add immune blood corpuscles and immune bodies. If there is no hemolysis, the reaction is positive. If the suspected blood serum did not contain antibodies, the complement would be free to act, and there would be hemolysis. This is a negative reaction. Levaditi and Yamanouchi¹⁵

11. Jour A. M. A., xlvi, No. 7, p. 606.

12. Archives Int. Med., ii, No. 1.

13. Ann. Pasteur Inst., 1902.

14. Deutsche med. Wehnschr., xxxii, p. 745.

15. Compt. rend. Soc. de Biol., 1907, xlvi, p. 740.

state that the antigen may be represented by sodium taurocholate and glycocholate, and, to a less extent, by lecithin.

These reactions may be illustrated by equations:

$A =$ definite. $S =$ Syphilitic. $X =$ Unknown or none.
 $a.$ Antigen + a. Amboceptor + Complement = Binding of the complement.

$a.$ Blood + a. Amboceptor + Complement = Hemolysis.

$a.$ Bacteria + a. Antibodies + Complement = Bacteriolysis.

S. Serum

$S.$ Liver ext. + $S.$ Antibodies + Complement = Binding of the complement.

Bound complement + Lamb's blood antibodies + Lamb's blood = Positive reaction; no hemolysis.

$S.$ Liver ext. + $X.$ Antibodies + Complement = No reaction; complement free.

Complement free + Lamb's blood antibodies + Lamb's blood = Negative reaction; hemolysis.

I do not wish to be understood that this last test can be used in office work, or that the above equations are anything more than illustrative, but just serve to show the principle of the test. This much we should understand about every test, even if we do not use it. A working knowledge of this test may be obtained from the various literature^{16, 17} on the subject.

Wassermann and Plaut¹⁸ were the first to apply it, and found positive in 78 per cent. of 41 cases of progressive dementia. The finding of antibodies was then confirmed by Detre,¹⁹ Meier,²⁰ Michaelis and Lesser,²¹ and Moranroth and Stertz.²² Levaditi and Marie examined the spinal fluid of dementia paralytics and tabetics and found luetic antibodies in a large per cent. of the cases; they also examined quite a number of control cases not dependent on syphilis and had uniformly negative results. But found positive in all of four syphilitic women whose milk was examined. Fisher²³ found the Wassermann reaction present in 84 per cent. of suspected syphilitics, one of forty years' duration. Citron²⁴ found positive in a large per cent. of the cases examined by him. Wollstein and Lamar²⁵ state that, in considerably more than 1,000 cases of syphilis in all stages, in paresis and tabes, a positive reaction has been obtained in approximately 80 per cent. of their number. While with normal and non-syphilitic serum the occurrence of the reaction has been reported but

once, namely, in yaws, by Blumenthal.²⁶ Wassermann²⁷ has made the same comment, with the exception of the report by Blumenthal.

Fleischmann and Butler²⁸ found positive in 29 out of 38 cases that they had reason to believe had been infected. Eight of the nine cases in which negative results were found the patients had taken or were taking mercury. This test was accepted by the International Congress of Hygiene, 1907, as a specific differentiation seroreaction.

Many observers now think (among them Wassermann) that the substance found in syphilitic serum is not an antibody, as was first thought to be the case. This does not discredit the test, for it makes no difference what this substance is that gives the test, so long as the test is specific. The test is simply diagnostic.

Schuster²⁹ sums up years of study on parasyphilitic nervous diseases, and his conclusions are that previous mercurial treatment does not ward off or retard metasyphilitic nervous affections. He says that this seems to favor the view that they are caused by antibodies and not by the virus. Biologic tests have shown that mercury does not expel these antibodies. The clinical picture is the same in tabes and general paresis, whether mercury has or has not been given.

I shall not attempt to go into the general treatment of syphilis, for these new findings have not affected it, except in some instances which will be mentioned.

The prophylaxis of infection may be carried out by the application of a 30 per cent. ointment of ealomel. Of course, this must be applied at the time of, or within a very short time after the infection. Numerous experiments on human beings and apes have proven the value of this measure.

Diagnosis can now be made from the primary lesion, and common sense demands that the treatment should start with that. Excision or complete destruction of the chancre should be practised in all cases. It has been shown that multiplicity of primary lesions does not exclude syphilis, and the grounds for guesswork in this disease are getting small, indeed. Finger reports a case in which the pallida were demonstrated, the primary lesion destroyed, and no symptoms had developed up to one year.

Excision of the primary sore should be followed by cauterization, and this followed by

16. Johns Hopkins Hosp. Bulletin, July, 1907.

17. Archives Int. Med., i, No. 3.

18. Deutsche med. Wehnschr., xlii, 1906.

19. Wiener klin. Wehnschr., xix, p. 619.

20. Berliner klin. Wehnschr., xlii, p. 1636.

21. Berliner klin. Wehnschr., xlii, p. 301.

22. Virchow's Archives, xviii.

23. Berliner klin. Wehnschr., xlii, No. 4.

24. Berliner klin. Wehnschr., xlii, p. 1370.

25. Archives Int. Med., i, No. 3, p. 315.

26. Deutsche med. Wehnschr., xxiv, p. 258.

27. Berliner klin. Wehnschr., xlii, No. 48.

28. Jour. A. M. A., xlix, No. 11.

29. Deutsch med. Wehnschr., xxxiii, No. 50.

active treatment in the form of arsenic, atoxyl, or, perhaps that which is safer, Fowler's solution.

We all know so well that the length of treatment for constitutional syphilis has been extended from time to time by expert observers until now we understand that any treatment short of five years is not safe. Ask yourselves, "How many cases have I that have taken full (safe) treatment?" and I am sure that the answer will be far from satisfactory. It follows from this that we all have cases we have treated who are in grave condition, are dangerous to the ones they love, and may bring into the world those terrible examples of hereditary syphilis.

The ideal way to treat syphilis now would be to make a specific diagnosis, excise the sore, give active early treatment, and then follow with treatment for the full time. If the patient does not realize the importance of full treatment and stops we leave him with full, early, active treatment which was considered so important even before the new light fell on this disease. If I were to have syphilis I would rather have an early excision of the sore and thirty days' active treatment with mercury than one year's treatment after I had constitutional lues. It is necessary in medicine sometimes to use the lesser of two evils, and it is our duty to do this when it presents itself.

The treatment of tertiary syphilis is now on a scientific basis. To treat these lesions with the iodids is wrong, as the virus of syphilis is active in this stage. Mercury (with the possible exception of arsenic) is the only direct parasiticide we have. The iodids are of value, however, to intensify the action of the mercury, promote the absorption of pathologic tissue and eliminate the toxins. The only rational treatment to-day of this stage is a combination of mercury and iodids.

Atoxyl to-day is an unknown quantity. The Liverpool School of Tropical Medicine first used this drug in sleeping sickness in May, 1905. After this, the work with *Treponema pallida* suggested that it was a protozoön (as is sleeping sickness). Atoxyl was naturally tried in syphilis. Atoxyl is sodium aminophenoldylate, and has been compared with Fowler's solution by the chemical laboratory of the A. M. A.³⁰ This shows that, while the claims for it are that forty times more arsenic may be given in this form, in reality but one and one-half times as much can be given. Hallopeau³¹ reports a woman, 47

years old, receiving 5.10 grams atoxyl in twenty-six days. She had complete blindness in 14 days after treatment was stopped. Moses³² reports 19 cases treated with atoxyl; 5 were cured and 7 improved. More or less serious effects were observed in all but 7 cases. Fehr³³ reports two cases of blindness from the use of atoxyl, but sight returned on stopping the drug. Koch had 22 cases of blindness while treating sleeping sickness, but the dosage at that time was larger than he now recommends. Hallopeau³⁴ reports the results of the use of atoxyl in 120 cases, his conclusions being that it has a powerful action on the infectious agent. He says if the injections could be long enough continued there is no doubt that the patient could be cured, but that this is not possible owing to the symptoms of intolerance. He states that it has a cumulative action, and the symptoms of intolerance have an abrupt onset. Hoffmann and Roscher³⁵ state that the drug does not influence the movements of the pallida in the test-tube even in 1 per cent. solution, but it seemed to banish the pallida from the blood of an infant with inherited syphilis, while no influence was apparent in another case of this kind. Koch now gives 7 grains atoxyl on two successive days with no bad results.

Until the growing of the pallida in pure culture can be attained we can only wonder what the opsonic treatment will offer when it does come. The subcutaneous injection of finely mixed chancre tissue shortly after infection has been tried, and it is said that quite a per cent. showed no evidence of syphilis afterward.

Tabes and general paresis have been proven to be, at least in the majority of cases, dependent upon syphilis for their existence, but the treatment has not changed, for the reason that it is the effect of some substance caused by syphilis and not by the virus.

Lenzmann³⁶ has revived the treatment of syphilis with quinin. He injects intravenously 7½ grains of quinin hydrochlorate and repeats this dose the next day, then injects 9 grains and repeats this four times at four-day intervals. He reports 14 cases cured.

Two new remedies recommended for syphilis should be mentioned. One is collargol, which is highly spoken of by Karlinski for the treatment of ulcerative and subcutaneous gummatæ; it is used the same as mercury plaster. The other,

32. Berliner klin. Wehnschr., July 22, 1907.

33. Deutsche med. Wehnschr., xxxiii, No. 49.

34. Bulletin Academia of Med., xlvi, No. 23.

35. Deutsche med. Wehnschr., xxxii, No. 22.

36. Deutsche med. Wehnschr., xxxiv, No. 10.

mergal, has the endorsement of Ehrmann for internal treatment. He claims that it has no effect on the mucous membrane of the intestine, is easily absorbed and pleasant to take. In conclusion, I will state that a very interesting fact has been established by the late work, and that is, "all cases of locomotor ataxia are not of syphilitic origin."

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from page 161, Vol. II.)

EARLY MEDICAL HISTORY OF RUSH COUNTY.

In the Transactions for 1874, beginning at page 63, Drs. W. A. Pugh, Marshall Sexton and John Moffett have furnished biographies of several of the early physicians of Rush County and adjoining localities. They are of sufficient historical interest for a reproduction at this place. Dr. Pugh writes:

"The first pioneer physician in southeastern Indiana of whom we have any direct knowledge is Dr. Wm. B. Laughlin, who was born in Washington County, Pennsylvania. He finished his classical education and graduated at Jefferson College, Canonsburg, Pa., after his third son was large enough to accompany him to the college on horseback. After his collegiate course he entered upon the study of medicine, on completion of which he removed to Kentucky and entered the active duties of his profession. In 1815, three years after his location in Kentucky, he again emigrated to the Northwest Territory, settling in Brookville, Franklin County, Indiana. During his sojourn at this place, besides attending to the medical wants of the then sparsely settled wilderness, he entered the employ of the government as surveyor for four or five years. He assisted in the survey of nine congressional townships around Indianapolis, eight around Noblesville, eight around Muncie, and eight around Anderson. While a citizen of Brookville he was elected circuit judge, and served in that capacity for a number of years. After the formation of Franklin County, he was elected to the state legislature and was on the committee which laid off the counties of the 'new purchase,' the body at that time holding its sessions in Corydon, Ind. He started the first classical school in eastern Indiana, at Brookville, on his own responsibility, and had the honor of turning out of its walls three governors

of the state, viz.: Noble, Wallace, and Ray. Many of the prominent lawyers of that day also were his pupils—O. H. Smith, James Rariden, etc. In the year 1820 he came into Rush County and laid off and located the town of Rushville, naming the county and town after old Dr. Rush, of Philadelphia, with whom he was on intimate terms of friendship. He and Dr. Sexton formed a partnership in medicine about the year 1822 for a term of years. I think he was without doubt the first physician worthy of the name who pitched his tent in this part of Indiana. He erected at his own expense a seminary in the young town and taught in it a select school, giving instruction in the ancient languages and higher mathematics.

"Dr. Laughlin was a man of versatile talent, and was endowed by Nature with indomitable energy and perseverance. He was a man of true metal. In addition to his scholastic attainments, he was faithful to obey the injunction, 'Be ye fruitful, multiply and replenish the earth.' He was the honored father of eighteen children by one wife. He was a man of piety, and was one of six to establish the Presbyterian Church at Rushville, Ind., in 1825. It may be said of Dr. Laughlin that it was to his standing and influence that the science of medicine was put upon a broad and a high basis in the new state in which he settled and with whose early history he was so closely identified. Died in 1836, aged 66 years."

H. G. SEXTON.

"Prominent among the physicians of that early day was my old friend and preceptor, Dr. H. G. Sexton. He was present at the birth of the writer of these sketches, and through childhood, youth and manhood was his adviser and instructor; for many years a member of his Sunday school class; afterward a correspondent through college life and an instructor in my profession, it was my privilege, as it was my pleasure, to know much of his character.

"Dr. Sexton was the pupil of the late Dr. Cruikshank, of Harrison, Ohio; was a New Englander by birth, and came west when he was quite a young man, in the capacity of a teacher, to hew out his own fortunes. About the year 1820 he went to the little village of Springboro, in Warren County, Ohio, to commence the practice of medicine, his stock in trade being an old and sparsely filled pair of pill bags, an Indian pony, and 50 cents in money. On arriving at the place, he put up at an inn kept by Job Pugh. He honestly told the landlord who he was, what was his business, and the financial situation; he

had to eat and he had to sleep, and if he could stay with him on these statements he would like to do so. The old Quaker, with his kindly wife, Sarah, admitted him to their household. That same old Quaker had a comely and benign-looking sister, Hannah, and it was not long before she had won the heart and affections of the young doctor, and not many months before they were united in wedlock. This was the most important, as it was the happiest, event in his life, for in her he secured one of the most amiable, even-tempered and lovable women that ever a man led to Hymen's altar, and much of the Doctor's success, in after life, must be attributed to the self-sacrificing, self-denying and patient qualities of his wife.

"About the year 1822 Dr. Sexton, with two of the brothers Pugh and their families, removed to Rushville, Ind. The town was just laid out. The county was one vast slush of mud and swamps. The land was densely covered with heavy timber, with an undergrowth of spice-wood, hickory and hazel bushes. There were no roads but those which had been rudely cut out of the underbrush, and no guide-boards but the blazes upon the trees. Here he pitched his tent, and there he labored and worked until the day of his death, in June, 1865. No man was more devoted to his profession, in all its interests, than Dr. Sexton; to it all other things must bend and all other circumstances must yield. He was possessed of a vast fund of experience, having been in active practice for more than forty years, and it being his delight to talk about his professional experience, made him one of the most companionable of men to his professional confrères. In the department of obstetrics he was particularly rich in experience of facts and practical results. It was his fortune to enjoy a larger experience in this field of his profession than any man of his day in southeastern Indiana, and as a consequence he excelled in the midwifery art.

"During the early years of his life his practice extended out from his home in a radius of twenty miles, which, of course, made his business laborious, requiring great industry, endurance and perseverance to undergo the work. These industrious habits formed in his youth followed him through life. Unlike many professional men who have gained reputation and wealth, he grew more studious and up to within a few weeks of his death he might have been seen busily employed at his professional duties. His age did not in the least lessen his industry. I have often heard him say, 'I can not live and

do nothing.' No man had more professional friends than he, and no man was more jealous of his professional honor. He had no patience with any other than a manly, dignified and straight-forward course in professional life. He was possessed of a vast fund of anecdotes, incidents and amusing circumstances, which had transpired all along the pathway of his professional career, and upon proper occasions would relate them with much gleesome humor. Seemingly cool and free from impulse or sentiment, he was a man of deep feeling and tender affections: benevolent in a quiet way, which was largely expended in his attention upon the poor whom he considered worthy of help. For a period of 45 years he was an integral part of the community in which he lived. As a citizen, he was on the side of progress. All public enterprises had his sanction, support and influence. He joined the Presbyterian Church at Rushville, Ind., the next day after it was organized, in 1825, and was, throughout his life, one of its mainstays and supports; was a devoted and faithful Sunday school teacher, rarely absent from his post during a period of 30 years. In June, 1865, he was gathered home as a shock of corn fully ripe. He left the record of a well-spent life; an example of industry and devotion to the place he chose to fill in his worldly pilgrimage."

J. M. HOWLAND.

(By M. Sexton, M.D., Rushville, Ind.)

"Dr. Howland was a native of Baltimore, Md. Born Dec. 22, 1792, and died in Brookville, Ind., Jan. 11, 1858. He received his degree of Doctor of Medicine from the University of Maryland in 1819, and practiced his profession for two years in the Shenandoah Valley, Virginia, when ample opportunities were afforded for the study of the various forms of malarial disease. From this time until his removal to Indiana in 1833, he was engaged in the active pursuit of his profession in the city of Baltimore. During this period the cholera made its first visit to that city. In this epidemic, Dr. Howland acquired quite a reputation for its successful treatment in private practice, and also as physician in charge of a cholera hospital improvised for the occasion.

"Dr. Howland was a gentleman of culture, and in his native city acquired distinction as a writer as well as physician. He was a frequent contributor to the religious publications of the Methodist Episcopal Church, as well as an able advocate with his tongue and pen of every great moral enterprise. He became somewhat noted

for his advocacy, also, of various public improvements, and after his removal west made a strong impression, wherever he was heard, by his accurate knowledge and earnestness on the subject of railroads. During the years 1834 and 1835 he sustained himself nobly in favor of railroads against canals.

"Dr. Howland was for many years in the habit of occasional preaching. As a public orator he was remarkable for his logical force, and the systematic presentation of facts, relying but little upon the imagination with which to take the fancy of his hearing 'prisoners.'

"From the midst of a host of professional friends, and while occupying an enviable position as a leading physician in a great maritime city, a leader in its polemics and a molder of its morals, he looked eagerly to the west for a field in which to attain greater usefulness and, of course, distinction.

"Removing west in 1833, he first took 'regular work' as a minister of the gospel. It was in the capacity of a physician that we first knew him. He brought to bear in the practice of medicine the same qualities of mind which distinguished him as a writer and speaker. Quick powers of observation, a thorough analysis of his cases, with a careful interpretation of their symptoms, made him precise and thorough as a diagnostician. He never guessed. He reached conclusions in medicine by as thorough a process of reasoning as could be brought to bear in determining a proposition in mathematics; hence he seldom made mistakes. His very precision and studied, careful manner, with the full, dignified bearing, which conscious ability inspires, did not serve to make him popular with the people. He was an earnest advocate of the highest code of medical morals, and scorned to resort to tricks by which less able men attained popularity and wealth. While the qualities of his mind and manners, as we have stated, did not make him popular, they were the very qualities which made him eminent among his fellow. His counsel was sought for, and his advice followed by the younger members of his profession, as that of an oracle. He died greatly beloved and respected by those who appreciated him, leaving behind him descendants eminent in the field of letters and law."

WM. B. FRAME.

"Among the early medical men of eastern Indiana, Dr. Frame stood deservedly high. Endowed with great natural ability, he had the advantage of many of his confrères in a thorough classical education. A native of Norfolk, Va.,

he removed in his youth to Lexington, Ky.; studied his profession with Dr. Toliver, of Paris, Ky., afterward of Cincinnati; attended lectures and took his medical degree at Transylvania University, Lexington, Ky. Dr. Frame, in 1827, selected Rushville, Ind., as his future home, finding in our large Kentucky population congenial associations, which lasted through life. He immediately entered upon a lucrative practice. To his native talents and finished education he also added great energy. With such elements, success was assured from the first. He married in 1832, thus adding another tie to the bonds which held him to the people of the county. Dr. Frame, unfortunately, was not endowed with a physical constitution proportionate to his mental ability. The rigors of the climate often overpowered him and he would be prostrated with diseases, the unavoidable result of exposure in his practice.

"By reason of the early advantages possessed by Dr. Frame, as was stated, his success was assured from the beginning, and he at once assumed a high position as a medical man, which he maintained until his death, in 1849. As he was Virginian born and Kentucky bred, he had a full share of that pride of character which accompanies good blood and good breeding. He was, as might be expected, a strict, conscientious man in professional morals, living himself up to the highest letter of the code. He demanded and commanded that respect from others which he generously extended to all honorable men in the same profession. Though dead now many years, his name is fresh in the memories of his associates and a large circle of patrons and friends."

FIFTH MEDICAL DISTRICT SOCIETY.

"The first medical society in the eastern part of Indiana was known as the Fifth Medical district Society. This was organized under the law of the state, we believe, which provided for societies throughout the state, in numbers equal to the congressional districts, perhaps, and with the same territory. To these societies was granted the privileges of issuing licenses, etc., though no law gave their membership any exclusive right to practice medicine. No record of the Fifth Medical District Society is known to be in existence, and but few of the original members survive. In the list of this membership we recollect as familiar names Drs. Moffatt and Brown of Connersville, Dr. Everett of Union County, Dr. Hamon of Burkville; Dr. Helm of Rush County, Drs. William B. Laughlin, H. G.

Sexton and Wm. B. Frame of Rushville. These are but a few of the early pioneer physicians.

"This society lived for several years, holding semi-annual sessions of two days each, exerting a vast deal of good influence in the enlightenment of its members, and wielding a great power in the community for the prevention of irregular medicine. We do not hesitate to attribute to the early teaching and example of these pioneer physicians much of the respect and confidence with which the profession in this part of Indiana meets at the present day. Regular medicine had then to compete with the Thompsonian system, and, under the fostering care of the men named, grew steadily in the esteem of the people, while the high-pressure doctors were compelled to seek unoccupied fields farther west. As might be expected, forty years ago the profession was not filled with learned men, i. e., men familiar with all the teachings of the schools, but earnest, observant men, fruitful in expedient, and, from necessity in many cases, self-restraint, they founded a corps of practitioners entitled, for their wonderful success under adverse circumstances, to our profound respect. This society grew so strong with the people that a connection with it was necessary to the success of a stranger who came asking support as a physician, and to this day it is expected by this community that their physicians shall be members of a 'healthy medical organization.' As before said, we attribute this healthy public opinion to the impressions made by our pioneer society and pioneer physicians of 40 and 50 years ago. We regret that we have no fuller data from which to speak of this association and its membership. It ceased to exist, from causes not now known, about 1838.

"The second medical society in which we feel any immediate interest was instituted in Rushville, Ind., as a county society in 1847 or '48. It included in its organization Drs. Frame, Martin, H. G. Sexton, M. Sexton, Jeff. Helm, J. M. Howland, Wm. Braden, Clifford, E. T. Russell, Tompkins, and others not now remembered. It adopted as its code of medical morals the Code of Ethics just published by the National Medical Association, and elected for its first president Dr. Howland. This society, we regret to say, was short lived. It attempted to do too much. It wished to make (under the advice of some members who had no axes to grind) physicians and members out of all who practiced, or wished to practice, and who could only do so with the endorsement which such a society could give. Under this arrangement, almost every one was admitted to membership, and a kind of license

to practice was given to all who asked. Of course, a society thus organized, having within itself the elements of its own destruction, could not live long. Those really interested in the progress of medicine did not feel honored by the indiscriminate manner of admitting members, and when they withheld their support the society died of its own weight.

"Of our last society—'Rush Medical Society'—organized June, 1856, and running a successful career until 1862, when its records were destroyed by fire, and reorganized the same year with a more select membership, it does not become us to speak. It is proper to say, however, that it is clean in its membership, scrupulously adherent to the Principles of Ethics, and, in its modest way, doing what it can for the advancement of its members in knowledge of practical medicine."

WM. H. MARTIN.

(By John Moffett, M.D., Rushville, Ind.)

"Dr. Wm. H. Martin was a native of Philadelphia, Pa. When quite young his father came west and found a resting place in Cincinnati, Ohio, where he pursued his original avocation, that of a wholesale merchant. Therefore, young Martin's first impressions as to business pursuits were those of a mercantile character, furnishing to his cast of mind but little attraction. As if still further to estrange him from the objects of his father's chief delight, at the period when it became necessary for the determination of the choice of an occupation, his father died, leaving the son nothing to rely on but his native powers. After an ineffectual essay in business, he was led to adopt the profession of medicine as the calling best suited to his tastes and aptitudes. Having enjoyed the advantages of a fair literary preparation, he placed himself under the direction of Dr. John L. Vattier, of Cincinnati, as his preceptor. For nearly two years he pursued his studies with a zeal and assiduity equaled only to his pressing necessities. Late in the year 1833 he made a visit to Rushville, Ind., where an aunt was residing. He was induced through her encouragement to make an effort to establish himself in the place in the practice of medicine. Through the personal influence of his aunt and her husband, Dr. H. G. Sexton gave him the rare advantage of forming a partnership, which soon gave him ample opportunity for a very general acquaintance with the people of the county, besides the ripened experience of an association of an extensive practice. In a professional point of view, this proved to be a lifelong advantage. At the close of the second

year of this association in business a mutual separation was concluded. Now he opened an office and began the successful prosecution of his profession, which he continued with the usual difficulties, reverses and successes until the year 1855, when, in the spring of that year, he removed to Jasper County, Indiana, near the county seat. Having located on a farm, enjoying the delights of agriculture and quietude, he spent the remaining number of his days, which were ended June 15, 1871.

"So ended a life filled with hopes and fears, joys and sorrows, that it might be truly said the cup of bitter and sweet equaled each other. As a man he was eminently social, fluent and entertaining in conversation, truly polite, accommodating and obliging as a neighbor and friend, indulgent to his children, ever watching for the welfare of his family. He aspired to distinction as a citizen, and served in the lower house of the legislature as clerk during the session of 1838. He held places of honor and responsibility in the Fifth Medical District Society, such as president and censor, and, in brief, maintained a respectable standing in the profession by his attainments and uniform courtesy of conduct in his intercourse with his medical brethren."

MEDICAL HISTORY OF DELAWARE COUNTY.

(By G. W. H. Kemper, M.D.)

Dr. Dickinson Burt was the first physician to locate in Delaware County after its organization in 1827.* The exact date of his location in Muncietown is not known—it was prior to 1829, for the official records show that, in addition to his medical duties, he was our second postmaster—his commission bearing date Aug. 29, 1829. The postoffice was at his home on the west side of Mulberry Street, near Gilbert Street.

The number of physicians multiplied as the population increased, so that the medical and surgical wants of the early pioneers were not neglected. These men were subjected to numerous hardships—riding on horseback, over mud roads, or along by-paths long distances by day and by night. These rides were made in all kinds of weather—beneath the piercing rays of a summer sun, or in frozen zero weather, or through drenching rains.

* Four hundred and thirty-six physicians have located in Delaware County during the eighty years of its existence.

This undecorated soldier, of a hard, unequal strife,
Fought in many stubborn battles with the foes that
sought his life.

In the night-time or the day-time, he would rally brave
and well,

Though the summer lark was singing, or the frozen
lances fell;

Knowing if he won the battle they would praise their
Maker's name,

Knowing if he lost the battle then the doctor was to
blame.

'Twas the brave old virtuous doctor,

'Twas the good old faintly doctor,

'Twas the faithful country doctor—fighting stoutly all
the same.

—Carleton.

The author of this paper located in Muncie Aug. 18, 1865, and I esteem it an honor to have known personally a large number of the physicians of this county. The physicians whom I met at the time above indicated were men of good attainments and ripe experience—a majority of them were elderly men, not only those located in Muncie, but those residing at other points in the county.

All physicians at that time were making country calls on horseback—a few only were using buggies or carts in the summer season while the roads were in better condition. I made my country calls invariably on horseback during the first three years of my practice, and also a part of the time for several years later. As the roads were improved, vehicles became more common, until gradually the doctor with saddle-bags merged into the physician riding in a phaeton, and still later, as at the present day, in an automobile—a veritable evolution as I have witnessed from equestrianism to electricity!

The physicians who practice in Delaware County to-day and ride along its roads and streets in buggies can little appreciate the hardships that these early practitioners endured before our gravel roads were made. Visits made on errands of mercy were often accompanied with peril, as it was no uncommon thing for the horse to mire in creeks and swamps. A thrilling experience in this line lingers in the memory of the writer. The hardships these men endured told upon their physical strength.

The various preparations of medicines have markedly improved during the past half-century, or even a quarter of a century. Concentrated medicines as fluid extracts, specific tinctures, tablets, etc., enable us to carry a large list of remedies in a small space, which is a great improvement over the cumbersome saddle-bags required in former days to carry roots and leaves for the preparation of infusions and decoctions.

Many of our valuable instruments in common use at the present day were but little known or unused forty years ago. About the year 1866 I bought a hypodermic syringe, which I believe was the first one to be used in Delaware County. I think Dr. Robert Winton owned the first fever thermometer in this county. Two were then thought to be necessary—one for the mouth and a curved one for the axilla. Neither of these were self-registering, and it was necessary to read them while *in situ*. These useful but crude instruments soon gave way to the neater thermometer, so accurate and essential at the present day.

COUNTY MEDICAL SOCIETY.

The first practical steps toward organizing a medical society in Delaware County were taken on April 18, 1865, when some of the physicians of the county met in Walling's Hall (west side of public square), in the city of Muncie, to take preliminary steps for the formation of a permanent society. At that meeting Dr. S. V. Jump occupied the chair, and Dr. N. W. Black was chosen secretary. A committee was then appointed, composed of Drs. Morgan, Winton and Craig, on permanent organization. The adjournment was until Monday, the first day of May, following, when the meeting convened in Dr. Winton's office, 112 West Adams Street. The physicians present were Drs. Armitage, Black, Craig, Hoover, Lewellen, Morgan, Skiff, Wheeler, Willard, Winton, W. H. Williams, and J. A. Williams. At this meeting the committee on permanent organization made a report and the plan of organization was read by sections, discussed, and adopted. The committee was continued, and empowered to revise the constitution and by-laws, and have the same published. Under this organization the following-named officers were chosen: President, Dr. S. V. Jump; vice-president, Dr. W. J. Morgan; secretary, Dr. N. W. Black; treasurer, Dr. William Craig; censors, Drs. Robert Winton, W. C. Willard and J. H. Powers.

At a meeting held June 5, 1865, Drs. L. J. Bonnels, J. C. Helm, S. E. Mitehell and H. C. Winans were admitted to membership. At a meeting held July 3, 1865, Dr. Henry Kirby was admitted, and at a meeting held in September, 1865, Drs. W. J. Andrews and G. W. H. Kemper were admitted to membership.

The Delaware County Medical Society has been reorganized several times since its first organization, in order to conform to the requirements of the State Medical Association, but the society has never failed to exist, and the present

one is virtually a continuation of the original society. So far as the author can ascertain, Dr. W. J. Andrews, of Newark, N. J., and Dr. G. W. H. Kemper, of Muncie, are the only persons living who became members in 1865.

The record of the physicians of Delaware County has been a creditable one; few moral delinquencies have existed. They have been industrious, as shown by the numerous contributions to medical literature contributed by our citizen physicians. Our death rate has not been excessive; our health officers have been competent, and our surgeons have successfully performed nearly all the operations known to surgery.

Dr. Dickinson Burt (1829) was the first physician to locate in Muncietown or Delaware County. I have no information concerning his individual history or the exact date of location. Dr. Burt was the second postmaster at Muncietown and filled that office from Aug. 29, 1829, to May 6, 1835. It is supposed that he left soon after the expiration of the term of his office. Nothing further is known of his history.

Dr. Levi Minshall (1829) was the second physician to locate in Muncietown. He was born in Virginia March 4, 1804. He was licensed to practice at Dayton, Ohio, in 1829, and came to Muncietown in the same year and at once began the practice of medicine. An old citizen who remembers Dr. Minshall's first appearance in Muncietown says that he came here from Dayton, Ohio, riding a very large iron-gray horse, and wore a suit of broadcloth, a circumstance that created almost a sensation among the primitive people living here at that time, as homespun jeans was the regulation apparel and broadcloth was reserved for the rich and nobility. He was a man of scholarly attainments and soon gained a prominent place in the community as a physician and a citizen. One of the interesting incidents of his early practice in the country when visiting the sick was that he would ride up and down White River in the water to avoid bears and wolves that roamed about in their native freedom in the woods in the territory which now comprises Delaware County. He died at Muncietown March 6, 1836, aged 32 years. His remains repose in Beech Grove Cemetery.

If the physicians whom I met in Delaware County forty-two years ago were to rise from the dead and appear in our midst to-day, they would be startled at our speeding automobiles, but no less surprised at our new advancees in medicine and surgery, as well as our strange medical terms, for, if they were to hear medical men

conversing about antiseptics, Listerism, anti-toxins, serums and germs, they would not comprehend their meaning. Should they attempt a surgical operation according to the rules of their day, they would be liable to answer to the charge of malpractice.

REMINISCENCES OF WESTERN HANCOCK COUNTY.

Reminiscences of western Hancock County (Transactions, 1874, p. 74) by Dr. J. W. Hervey, of Indianapolis, is worth reprinting because of its historical value.

"In 1846 the congestive fever, as then called, made its appearance. Many died: in fact, all the patients of some physicians. Dr. Moore, of Cumberland, contended that bleeding was the only remedy; after that, calomel to ptyalism. He lost nearly every case. A consultation was called at Cumberland, to which all physicians connected with that investigation were invited, and a treatment was agreed upon, embracing the tonic feature, but not sufficiently heroic; but each member grew into the habit of saving his patients by full and frequent doses of quinin. The great hindrance to the use of quinin was its cost and the scarcity of money. Quinin cost \$6.00 (I think at one time \$8.00) an ounce, and scarce at that. Dr. Hervey bought up a number of fat cattle, drove them to Indianapolis, sold them for \$7.50 a head, and bought quinin with it.

"In 1847 a singular epidemic of the smallpox appeared in this locality. Erysipelas had been prevailing, and what was called black tongue. A healthy man by the name of Snyder took the confluent variola. The whole surface swelled enormously. Dr. William R. Smith had come to Cumberland some time before that, and Dr. Bobbs, who came to the same place about the same time, were called to see him, but failed to diagnose the case. The next day Dr. Hervey was called in consultation, who pronounced it smallpox modified by erysipelas. Failing to agree with the other doctors, he left. They bled the man profusely and he died in twenty-four hours after. The people flocked from all about the country to see him. The consequence was the disease spread through the country. Dr. Hervey treated 84 cases, and did not bleed or deplete one of them, with a mortality of but two children and three grown persons. All who were depleted, without one exception, died. Dr. John S. Bobbs and Dr. Ballard, of Indianapolis, and Dr. Brown, of Bethel, were called together at Isaac Snyder's to see a case, who agreed with Dr.

Hervey that it was smallpox modified by the prevailing diatheses of the country. The fact of its making its appearance without any one knowing how, agitated the public mind to the highest pitch, and, as Dr. Hervey had seemed to become prominent in the treatment of the disease, it was finally widespread that he started the disease for the purpose of getting into business. He had seen it in Cincinnati the winter before, and it was claimed that he brought a scab with him, and by that means, or some other way, originated the disease. He had used nitrate of silver and tincture of iodin to prevent pitting. One Miss Burris lost one eye and was otherwise disfigured by scars, she having had a bad case of confluent smallpox, some of which formed in the eye. Popular prejudice pointed to this case as one of malpractice, and suited to punish him for having started the disease. The prejudice and bad feeling against the doctor was so popular that his counsel advised him to take a change of venue to Shelby County. The depositions of Dr. Jackson of New York, Prof. Robley Dunglison of Philadelphia, and the evidence of Dr. John S. Bobbs, before the time of trial, caused the case to be withdrawn. The doctor's character was vindicated, and he rose in time above it, but it cost him about three years of his life's best efforts. This case is a valuable one in the history of our profession, and shows how dangerous is the ignorance of the masses when brought to bear upon a member of our profession."

EARLY MEDICAL HISTORY OF NOBLE COUNTY.

Dr. J. L. Gilbert, of Kendallville, in the Transactions for 1874, p. 73, gives an interesting account of early medical matters in Noble County. It is here reproduced.

"On the 12th of July, 1858, a number of the physicians of the county met at Ligonier and organized a county society, with D. W. C. Denny, M.D., president, and S. H. Estabrook, M.D., secretary. The organization was kept up but a short time. I think there were only two meetings held. There seemed to be much indifference with reference to medical societies among the physicians of the county, which accounts for its short life. This was the first effort in Noble County to organize a medical society.

"On the 15th of June, 1870, the Northeastern Indiana Medical Society was organized. This society embraces the counties of Noble, Lagrange, Steuben and DeKalb. The movement which culminated in this organization originated in Noble County, being first suggested by myself.

"The following named gentlemen were present at the first meeting: From Noble County—D. W. C. Denny, C. Palmiter, W. D. Randall, U. J. Ward, T. E. Adair, D. N. Fansler, L. F. Abell, J. L. Gilbert, G. W. Carr, H. Landon, P. W. Crum, W. H. Franks, R. Wright, O. J. Vincent, and S. T. Williams. From Lagrange County—John Dancer and J. N. Denny. From Steuben County—H. D. Wood.

"DeKalb County was not represented at the first meeting, but was included in the organization, and S. Stough, from that county, was elected a member on recommendation of H. D. Wood.

"O. J. Vincent was elected president, and one vice-president from each county, viz.: H. D. Wood, John Dancer, C. Palmiter and S. Stough; secretary, J. L. Gilbert; treasurer, L. F. Abell; board of censors, D. W. C. Denny, S. T. Williams, W. H. Franks, H. Landon and G. W. Carr.

"The officers were elected annually. The presidents thus far have been O. J. Vincent, H. D. Wood, J. Dancer and G. W. Carr. The society numbers seventy *bona fide* members. These are divided among the counties as follows: Noble, 31; LaGrange, 13; Steuben, 13; DeKalb, 13.

"The following named gentlemen are honorary members, most of whom meet with us at least once a year and take an active part in the proceedings: N. S. Davis, J. Adams Allen, M. M. Latta, Theophilus Parvin, B. S. Woodworth, T. A. McGraw, Edward Jenks, Leartus Connor, R. C. S. Reed and C. S. Frink.

"The meetings are held quarterly and are well attended. I do not know of a single successful irregular practitioner within the bounds of the society. Two or three 'eclectics' of some professional standing in the community have abandoned the distinctive name and have been admitted to the society and are good members. It has promoted general good feeling among physicians, which is always the result of intimate acquaintance among ethical men.

"On the 15th of November, 1873, the Noble County Medical Society was organized under a call made in pursuance to the request of the State Medical Society to organize county societies throughout the state. G. Erickson was made president, and N. Teal secretary. Two meetings have been held. Most of the physicians have joined it, and I doubt not this society will succeed."

(To be continued.)

SPECIAL ARTICLE

PSYCHOTHERAPY.*

Psychotherapy has been defined as an attempt to help the sick by mental, moral and spiritual methods.

The attempt, in a scientific way, to take full advantage of suggestion and persuasion in the treatment of disease is indeed of very recent date, but the unconscious use of psychotherapeutic measures is probably as old as the human race.

I knew an old lady to whom people came from all parts of the county for help for their children in whooping cough, of which disease she was reputed to have cured many. She, herself, never advertised her powers, nor did she accept payment for her services. Indeed, she was very frank to say that all she ever did was to prepare for the sick child some simple nourishing broth, knowing it could do no harm, and, as she naively said, "if they thought it would help them, maybe it would." Strange to say, many dated their recovery from their visit to her, and to the time of her death she was pointed out as the woman who saved the life of this or that member of a family.

Probably hundreds of such instances could be cited throughout the United States today. Here was credulity, confidence, conviction developed out of whole cloth and exerting a powerful suggestive influence. Now, with a person of less intelligence than this admirable little old lady, a simple broth would have become a concoction or infusion, belief in the efficacy of the preparation would have been easy in the face of the testimonies of those treated.

We have here all the conditions for the development of the quack of today or the sorceress of an earlier date, with the entire gamut of charms, incantations, occult influence, pacts with the devil and every sort of foolish potency by which it was conceived that cure of disease could be wrought.

So conditions have no doubt been ripe at all times in the history of the human family for the development of uncritical belief in the efficacy of supposed curative agencies, a credulity shared in many cases not merely by the sick person, but equally sincerely by the person called on for help. And, inasmuch as credulity is really an agent

* In the preparation of this article I wish to acknowledge my indebtedness to Dr. Richard C. Cabot of Harvard, for notes on lectures I had the pleasure of hearing him deliver in February and for articles which he has contributed to Psychotherapy. I wish, also, to acknowledge my indebtedness to Dr. Frederick Peterson of Columbia and Dr. Garrigue for their article on "The Psychotherapy of Drugs," taken from the French "Isolement et Psychotherapie," by Camus and Pagniez, in Psychotherapy, Vol. 1, No. 3.

in the healing of disease, doubtless remarkable cures were often accomplished in this way.

In our own country we have good illustrations of the power of credulity in treating disease in the work of the "medicine men" among the Indians and the "voodoo doctors" of the southern negroes. More conspicuous illustrations of this method of healing people are found in such resorts as Treves and Lourdes, where occasionally multitudes of people are healed of many diseases. It is estimated six million people visited Treves in 1891 when last the "Holy Coat" was publicly exhibited. Crowds numbering hundreds of thousands visit the sacred spring of Lourdes in a single season, and the multitude of cures is astonishing.

The ancient Egyptians were zealous students of medicine, yet Dr. Ebers tells us they attempted to enhance the efficacy of treatment by use of magic formulas. The prescriptions of the Ebers Papyrus are accompanied by forms of exorcism to be used at the same time, and yet "many portions of the work," says Ebers, "give evidence of the advanced knowledge of its authors."

Pythagoras extolled the efficacy of anise held in the hands in combating epilepsy. Hippocrates says that all sorts of lichens are cured by the skin of the viper. Herophilus considered all plants, the most simple, as endowed with special and very great virtues. Alexander of Tralles, who has been considered one of the most worthy authors of the fifth century, extols from his own experience the use of castoreum in soporific fevers and in a number of other affections. Rhazes, an Arabian of a later period, advised in several cases the use of red coral and precious stones. Early in the fourteenth century Gad-densden, professor of medicine at Merton College, Oxford, pretended, by making use of fennel and parsley in wine, to have cured a man blind for 25 years. Platearius (middle of the sixteenth century) advised, when a patient is attacked by a stubborn vomiting and can keep nothing in the stomach, to bind his limbs before administering any medicine.

Dr. Peterson of Columbia University calls attention to what he considers the most beautiful examples of medical suggestions or unconscious psychotherapy furnished by the success of the following famous remedies: Theriaca, orvietan, bezoar and antimony, which were used for years, and even centuries, effecting cures until their inertness was discovered.

Theriaca, invented by Andromaeus of Crete, physician of Emperor Nero, had from its very origin such a success that Antoninus had it pre-

pared in his palace and took a portion equal to the size of a bean every day while fasting. It was a panacea for all infectious diseases, poisonings, fevers, etc. With diverse vicissitudes, theriaca survived the ages, and it was found more in vogue than ever from the sixteenth to the seventeenth centuries.

In 1658, when Louis the fourteenth was attacked by a typical typhoid fever and, after a long consultation with his physicians, took antimony and recovered, the fortune of the drug was made and its virtues firmly established for a long time.

Without multiplying examples of medical suggestion further, this brief consideration of drugs which have been held in high esteem by physicians and laity which are now known to be inert, forces us to the conclusion that all unconsciously psychotherapy has been one of the most powerful and widely used curative measures employed by the medical profession.

Dr. Peterson observes that "by the side of charlatans of every degree many observing practitioners have believed that imaginary ailments should be met by remedies of like nature. The laws of simili similibus dominate this system of therapeutics, of which the mica pill is the most serious representative. Innumerable cures are due to it, even among crowned heads, for Corvisart, who did not scorn to use it, had a fine success with it for the Empress Josephine. Today the system still holds its own in spite of the severe competition of pills of methylene blue."

Psychotherapy is a widely spread force and exercised by a multitude of persons, by the half of the world which lifts. It includes all the ways of maintaining the health in a personality through the agency of the mind. It is employed as suggestion under hypnosis, as waking suggestion and as persuasion. Hypnotism is employed today only in those cases of alcoholism or drug habit, in which there seems to be no spark of stable character to appeal to. Suggestion may be used in two widely different ways. A common form is that used when we say "the furnace is too hot, better let it go out." It is used in a technical sense when we enlarge an idea within the mind of a person without his knowing how it got there. This may be accomplished by any means, as by words or gestures, usually by emphatic declaration.

We may consider four types of suggestions, viz., atmosphere, command, encouragement, and medical suggestion. The atmosphere of an individual is a powerful element in suggestion. It is expressed in the attitude or bearing, in the step,

voice and eye. These physical elements unite to give an atmosphere of good fellowship, of courage, faith, sincerity, honesty, etc. They combine to make up the tranquilizing personality; they give rise to the pervading influence of people who refresh one, who give one a new start. One of the most effective methods of insinuating a belief or impulse into the mind is by emphatic declaration or command. Physicians in all times have expressed themselves in the imperative mood. Whatever preliminary indecision there may be, it ends, on diagnosis, with such instructions as "do," "take," etc., expressed in many cases with a tact such as characterizes the acts of a tactful woman. The patient as a rule obeys without criticising, without reflecting, without reasoning, without deciding; he acts in accordance with the suggestion.

In all these cases we are getting smooth reactions. We ask the patient to open his mouth and shut his eye.

Environment is powerfully suggestive. When one has taken off his every-day clothes and put on his Sunday best he acts under the influence of certain auto-suggestions. We are all familiar with the cheerful or dreary effect of rooms, of buildings and of the weather, of music and art.

Under the head medical suggestion we enumerate medical and electric belts, magic rugs, magic handkerchiefs, the laying on of hands, the effect of healing relics, the action of healing springs and of bread pills. In Massachusetts a chestnut carried in the pocket wards off rheumatism. In Ohio it is the potato which is credited with this virtue. Dr. Cabot, in an address delivered at Harvard in February, stated that he knew of a hospital in which a tuning fork was used as a magnet. When he remonstrated that it was acting a lie the staff officer replied that it was not a lie, that it cured. All of these things cure, and yet they are all lies.

There is suggestion in electricity, in a hospital, in the ereschendo treatment, in which an initial dose of one drop is increased one drop per dose until a maximum is reached. Neglect may be used for its suggestive influence. When a patient thinks he is very ill it may do much good to stop going to see him.

The question naturally arises, what separates the good from the bad in suggestion. In all cases physicians should be governed by the truth. Encourage the patient by telling him the truth, but there is no reason why the truth may not be told in a soothing, quieting, restful tone of voice.

In the field of medical suggestion, if a doctor believes in the action of a certain drug, the fact

of its having a bright green color which will have an effect on the patient's mind is no reason why it should not be used.

Suggestion is of greatest value when it is subordinate to reason. The evils of suggestion should be counteracted by education. Suggestion, apart from education, is a sort of spiritual cocktail. It may lift up, but the patient falls back again. The doctor should struggle constantly to make people make up their own minds. Suggestion, apart from education, is a crutch which enables the patient to walk better but does not enable him to walk alone. When a patient has been hypnotized or tricked into a better state of mind and body he has no experience which will be of service to him in the next crisis; his permanent recovery is not assured. When a patient through education or persuasion (a term preferred by Dr. Barker to suggestion) climbs back to health, the experience of so doing, the confidence gained, the understanding acquired, is one of the best guarantees of his future health.

Persuasion and education are time consuming for the doctor. Great discrimination must be exercised in the selection of cases. A case diagnosed neurasthenia died two months later of carcinoma of the lung. The doctor should not make the mistake of saying that the troubles are purely imaginary. As will be shown later, there are probably no imaginary diseases, and it leads to harm to say so.

A diagnosis having been made, the false conceptions of the patient must be broken down, explained away. The illogical reasoning, deductions, and conclusions, must be shown to be illogical by a process of reasoning as simple and clear as that two and two make four. The phobias must be recognized and sympathized with, encouragement must be given and ways of overcoming them suggested. So on through the range of symptoms. The treatment will often tax the best resources of the physician and require of him his maximum effort in thoughtful deliberation to successfully care for such cases. Professor Oppenheim of Berlin has resorted to writing to his patients in certain instances in which he wished the patient to be able to read over at leisure and repeatedly what he had to say. In this connection the debit and credit account which Dr. Hutchins of Indianapolis employs seems to me admirable. He requires his patients to debit their account with their misfortunes and credit it with their blessings. It is a means of developing optimism. A written statement also serves as a means of getting con-

flicting conclusions before a patient's mind and attention, a feat not always easy when dealing with a nervous, excitable patient.

In employing suggestion or persuasion it is the more effective the higher the percentage of the total attention of the patient one can secure. If the patient's eyes are on the physician's, but his mind on himself, a fitful 25 per cent. to 50 per cent. of attention will yield small results. The patient should be made as comfortable as possible and relax from muscular and nervous tension. To this end a room subdued as to its furnishing and lighting, with a large arm chair for the patient, suggestive of comfort and relaxation, may prove an environment very helpful to a doctor who is attempting to break up the mental adhesions of a patient.

One of the greatest elements in the rest cure associated with the name of Dr. S. Weir Mitchell was the suggestive influence of the treatment. Dr. Mitchell indicated the importance of seclusion, feeding, massage, bathing, electricity, but more important than anything else were the daily visits of Dr. Mitchell. He educated his patients while resting. Many of his followers have caught only the purely physical elements of his treatment. If one has a nail in his heel he may walk along on his toe or sit down. This is the rest cure. Going to a cobbler and having the nail pulled out is a measure little less radical than the addition of psychotherapeutic measures to the old rest cure. A young man of expensive habits gets in debt. His father steps up, pays the bills and starts him in again. This is only a rest cure. It relieves temporarily, but does not guard against recurrence. To accomplish this the young man's ways of life must be changed. The rest cure is abused unless it is the first step in the reconstruction of our lives.

There are cases in which rest is not the first step. Fatigue may be due to chafing under restraint. The process of self-digestion set up in an ill-nourished area of the stomach, characteristic of stomach ulcer, is very like what happens in people's lives when they live narrow lives and have too little work or work not of the right kind. Many human beings are like bicycles—they fall down when not running. Many people need more work and are cured by work. The principle is somewhat similar to getting one's second wind.

It is commonly stated that psychotherapy is applicable in functional diseases, the theory being that in functional diseases there is no organic lesion present. Dr. Cabot, in No. 3, Volume 1, of Psychotherapy, published by the Center Pub-

lishing Company of New York, discusses this matter as follows: "We may say there are at present three types of opinion regarding the nature of the so-called functional neuroses, such as nervous prostration, nervous dyspepsia and hysteria. One group, following the lead of Professor Pierre Janet of Paris, Professor Dubois of Berne and Professor Morton Prince of Boston, assume that they are wholly of mental origin and conclude that their treatment should be wholly psychic and moral. At the other extreme comes the Philadelphia school, a group of physicians influenced by the views supposed to emanate from Dr. S. Weir Mitchell of Philadelphia. These experts insist that physical methods, such as rest, over-feeding, and massages, are the main factors in the cure of functional or nervous disorders, because they believe that these disorders are fundamentally physical and are due, in fact, to fatigue, strain and their effects.

"Both of these opinions seem to me to err in that they suppose that disease has a single cause, physical, chemical or mental. The sounder view, it seems to me, is that represented by a third group of physicians, of which Dr. James J. Putnam is a brilliant example." Dr. Cabot then proceeds to develop the idea held by the third group, that disease is a vicious circle involving for the most part, not one, but a number of organs and tissues, with a group of symptoms, and that the disease may be successfully attacked by breaking into this vicious circle at any place and not merely at its supposed starting point. He illustrates by citing an ordinary case of heart disease with symptoms referable not only to the heart but, far more largely, to the lungs, the liver, the kidneys, the brain and subcutaneous tissue. Relief may be given through the kidneys, or through tapping the dropsy, and so enable the heart to get a grip of itself again, to recover its balance and resume its normal function.

In this vicious circle mind always takes its part, whether for good or evil, but, so far as experience has yet shown, the part appears to vary enormously in different diseases.

Dr. Cabot concludes his argument that there are no purely mental or purely physical diseases as follows: "The whole man is always involved in the fight against disease. The distinction between organic and functional disease is not a distinction between a wholly physical and wholly mental malady, because there are no such maladies. The simplest fright or worry may produce its physical effects (sweating, palpitation, insomnia). These effects then react upon the exciting cause, reverberating throughout every organ, and

in some cases through other people as well. At the other extreme even a broken leg may be hindered in its healing by mental turmoil, resulting in insomnia, which in turn leads to malnutrition, and this to a reduction of the healing power of the tissue."

Since in every so-called functional disease we must suspect an organic disturbance even though we are unable to demonstrate it, how important it is that all such diseases should be under the immediate care of a physician.

Since in every so-called organic disease we must recognize functional or mental elements, how important in our effort to maintain the health of the individual that we do not neglect the mind, that we recognize the correctness of the contention of psychologists that it is a mistake to attempt to separate mind from body and treat each as a separate entity.

Psychotherapy is employed to an extent by everyone, but it is practiced most by teachers, social workers, physicians and ministers. A patient may come to a doctor when he should go to an employment agency. Some need a teacher or a minister or a psychologist. It is the recognition of this fact which is the distinctively American contribution to psychotherapy.

The American type of psychotherapy attempts rationally to combine and secure team play of all psychotherapeutic methods and agents. This is the best thing attempted in the Emmanuel Movement.

The following are the rules governing the reception of patients for instruction at Emmanuel Church:

"1. No person shall be received for treatment unless with the approval of and after having been thoroughly examined by his family physician, whose report of the examination shall be filed with the minister's records.

"2. No patient shall be referred for diagnosis or treatment to any specialist or assistant save with the advice and consent of the patient's own physician.

"3. All patients who are not under the care of a physician must choose one and put themselves in his care before they can receive instruction at Emmanuel Church. To those who ask for advice in this choice there shall be handed a printed alphabetical list of all the general practitioners (internists) attached to the visiting and out-patient staffs of the Boston City Hospital, the Carney Hospital, the Homeopathic Hospital and the Massachusetts General Hospital."

It is evident from the above that Dr. Wooster, Rector of Emmanuel Church, insists that the ini-

tiative and the responsibility of diagnosis must rest with the physician, to whom he lends his assistance. He avoids the error of the Christian Scientists of treating by suggestion cases with far advanced organic disturbances. He insists on a diagnosis and places the responsibility of diagnosis with the medical profession. If on diagnosis the trouble is one in which the instruction, encouragement or persuasion given by a clergyman can avail, he is ready to help the physician just as his church backs up, supports financially, the tuberculosis class in charge of Dr. Pratt at the Massachusetts General Hospital. Since some of the phobias of nervous people have a religious background, the helpfulness of Dr. Wooster in these cases is not to be underestimated.

A word as to the preparation of Dr. Wooster for this work should be in order, as indicating the preparation which ministers interested in this work should expect to make.

Dr. Wooster is a graduate of Columbia College and Theological Seminary. He took his doctorate at Leipzig, cum laude. He taught psychology and history of philosophy at Lehigh University. For eight years he was rector of St. Stephen's, Philadelphia. One of his parishioners in Philadelphia was Dr. S. Weir Mitchell, and in the days of their close friendship the idea was conceived which has borne fruit in the Emmanuel Movement.

In order to grasp fully the relation of this Emmanuel Movement to the work of the medical profession it will be necessary to understand the development of the work of the Social Service Department of the Massachusetts General Hospital. The purpose of this movement is to focus upon the patient all the aid which can be secured in a whole community, from every sort of organization, for the cure of the patient. This involves a systematic utilization of employment agencies, social workers, trained nurses, trained visitors (who go into homes, investigate conditions, and report to the doctor), church organizations, lodges, etc.

Just as a doctor may call a trained visitor to go into a home and teach a mother how to modify milk, in the same spirit he may call to his aid the services of Emmanuel workers in a case of neurasthenia with religious phobias.

A report of the work of the Social Service Department of the Massachusetts General Hospital is being prepared for publication at an early date.

BURTON D. MYERS.

Indiana University, Bloomington, Ind., April 30, 1909.

THE JOURNAL
OF THE
INDIANA STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Indiana

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MAY 15, 1909

EDITORIALS

THE ATTACKS ON THE A. M. A.

The enemies of the American Medical Association are at present more active than usual in their efforts to destroy the usefulness of the Association and blacken the names of all those who are entrusted with the duty of carrying out the Association's policies. The editor of *The Journal of the American Medical Association* is the special target at which the more venomous arrows are aimed, but the board of trustees and other officers, and even the poor privates in the ranks who support the Association, come in for condemnation and abuse. Since the first of the year several particularly defamatory articles from the pen of a well-known genito-urinary specialist, distinguished as an author, teacher and surgeon, have been issued and sent broadcast, and the subsidized press of the Proprietary Medicine Association has given generous assistance in the efforts to bring the A. M. A. and its supporters into disrepute. No expense has been spared, for printing bills, postage, fees to detectives, and salaries or perquisites to agents or trusted friends have evidently been met cheerfully and uncomplainingly in carrying on the work of vilification. Not content with the effect produced by the defamatory articles printed and circulated by a subsidized medical press, the enemies of the A. M. A. have sought the columns of the daily papers. This has not been done because the public is interested, but because it was thought that the tearing down process would be more spectacular, and therefore more effective, with the audience enlarged by the addition of the public.

What prompts these attacks? The answer is plain to everyone who has taken the time and trouble to read the defamatory literature that has been sent out. In some instances personal spite is at the bottom of vicious attacks, and in other instances, by far the more frequent, it is a question of private gain which prompts the attacks. Not one of the men who are attacking the A. M. A. and its officers and friends in such

a discourteous manner and directing their energies for the most part to abuse of persons who happen to be in control by virtue of election, can truthfully say that the Association does not stand for all that is for the best interests of medical men, individually and collectively. The very fact that the Association has grown in size and broadened its field of usefulness, that it has taken an active stand in suppressing some of the impositions practiced upon medical men, and that it has attempted to elevate the social, moral and scientific standing of the profession has been sufficient to develop the ill-will and encourage the most unprincipled and villainous attacks from those who unfairly profited at the expense of the medical profession.

The first in this list are some of the proprietary medicine manufacturers. They objected to an exposé of their dishonesty and untruthfulness. Why shouldn't they? Fortunes have been made by carrying on deception and trickery in the manufacture and sale of preparations of secret formulae. The A. M. A. asked them to be honest. Some of them complied with the request and are pleased with the result. Others refused, and for the reason that to comply with the request would necessitate a large financial loss and perhaps suspension of a business founded and kept up on deception.

The second in the list are some of the independent journals that are largely supported by or perhaps owe their existence and support entirely to the advertising patronage of dishonest pharmaceutical houses. With the prospect of losing a large part of the income from advertising as a result of the campaign of education started by the A. M. A. these independent journals immediately championed the cause of the dishonest manufacturers and became enemies of the A. M. A. No war was waged on them or is being waged now. They were shown how they could help along a good cause and in the end at a profit to each and every one of them having a legitimate right to exist. We need and we should have independent journals, but the time has come when we should have independent journals that are not controlled nor influenced by the venal proprietary medicine manufacturer.

Third in the list of enemies of the A. M. A. are the few medical men, and they make as much noise as an army, who are disappointed office seekers, possessors of petty personal spites, or endowed with that dangerous mania which makes them "agin the government" whether the government is good or bad.

The sensible element in the medical profession, in the majority, we think, will not be led

astray by the villainous attacks on the A. M. A. coming from the sources mentioned. The average medical man knows that the A. M. A. has, through its policy of organization and beneficent administration, given him more benefits of direct value to him than he could have obtained in any other way.

The Council on Pharmacy and Chemistry, the thorn that pricks into the flesh of the enemies of the A. M. A. deeper than anything else, is one of the most valuable features of the Association. Every honest manufacturer of pharmaceutical specialties commends the work of the Council, and every progressive physician accepts the work of the Council as a standard in deciding upon the quality and efficiency of preparations that he uses in his daily work. Without the aid of the Council the physician would have to depend upon the word of the manufacturer, and experience has shown that all manufacturers are not honest, and if they were all honest there would be no objection to the establishment and present existence of the Council.

The A. M. A. has given us the best medical journal in the world, and the best evidence of the good judgment of the various boards of trustees in keeping the present editor for so many years is a comparison of the *Journal of the A. M. A.* as it is now with what it was when the present editor took hold of it. Dr. Simmons' work for the A. M. A. and its journal speaks for itself, and in the final estimate of fitness it is results that count.

We have faith in the good judgment of the medical profession as a whole, and we do not believe that the vicious and unwarranted attacks on the A. M. A. and its policies will be given serious attention. The work of the Association has been in the interest of the medical profession and constantly along the line of progress. Its beneficial effects in raising the social, educational and economic standards of the profession are of inestimable value, and the results have been accomplished in a manner that does not permit a question of motives or methods. We hope that an appreciation of this fact will be manifested at the coming session of the A. M. A. by an endorsement that will leave no room for doubt as to where the majority of reputable and progressive medical men of this country stand.

Bearing on the above, the following resolutions are of interest. The first was adopted by the Lancaster County (Nebraska) Medical Society, to which Dr. Simmons formerly belonged; the second, by the Omaha-Douglas Medical So-

society, and the third, by the House of Delegates of the Nebraska State Medical Association, of which Dr. Simmons was secretary for many years. The fourth was adopted by the Council of the Chicago Medical Society.

RESOLUTIONS ADOPTED BY THE LANCASTER COUNTY, NEBRASKA, MEDICAL SOCIETY, APRIL 22, 1909.

WHEREAS, It has come to the knowledge of the Lancaster County Medical Society, formerly the Lincoln Medical Society, that Dr. George H. Simmons, of Chicago, for many years a member in good standing of this society, is being made the object of an attack affecting his reputation and professional standing while a resident of Lincoln, therefore, be it

Resolved. That the members of this society, many of whom were medical practitioners in Lincoln during the time of Dr. Simmons' residence, hereby give expression to the esteem in which Dr. Simmons was held while in Lincoln and hereby acknowledge the valuable service he rendered to the profession here in Lincoln and in Nebraska.

Further, the society is pleased to place itself on record as appreciating the honor conferred on it by Dr. Simmons' distinguished services since his election as General Secretary and editor of *The Journal of the American Medical Association*.

And, further, we trust that no action will be taken which will discourage the efforts of a man who has labored so long and so consistently in behalf of medical progress and the development in this country of medical affairs.

The resolutions were unanimously adopted.

RESOLUTIONS ADOPTED BY THE OMAHA DOUGLAS MEDICAL SOCIETY, APRIL 20, 1909.

WHEREAS, Members of the Omaha-Douglas County Medical Society have been reliably informed that grave charges for alleged unprofessional conduct have been filed with the Chicago Medical Society against Dr. George H. Simmons, who was for many years a resident of the State of Nebraska, a member in good standing and for several years the Secretary of the Nebraska State Medical Society, that he is the object of a bitter personal attack to destroy his reputation as a man and his professional standing while a resident of our state, and,

WHEREAS, We have personal knowledge of his exemplary conduct as a man and a physician since he became a member of the Nebraska State Medical Society, his excellent services as its secretary and his splendid record as editor of the *Western Medical Review*, therefore, be it

Resolved. That the members of the society, nearly all of whom recall his excellent services and many knew him personally while he resided in Lincoln, desire to make known their high regard for Dr. Simmons, and bear testimony of the valuable services he rendered to the medical profession of Nebraska, and be it further

Resolved, That this society desires to place itself on record, that the election of Dr. Simmons to the secretaryship of the American Medical Association was regarded as a great compliment to him and an honor to the profession of the state, and be it further

Resolved, That we hope that the Chicago Medical Society will not entertain the charges preferred, but

that he will be commended and not discouraged in the work he has carried on with such distinguished ability in the behalf of the medical profession of our country.

**RESOLUTIONS ADOPTED BY THE HOUSE OF DELEGATES
OF THE NEBRASKA STATE MEDICAL ASSOCIA-
TION, MAY 6, 1909.**

Resolved, That the Nebraska State Medical Association, through its House of Delegates, desires to place itself on record in opposition to the attack now being made on Dr. George H. Simmons. We believe that the various and illy-disguised interests behind this attack merit the severest criticism for the position they have assumed.

Dr. Simmons was for a number of years a member in good standing and for several years secretary of the Nebraska State Medical Society. He was devoted to our interests, and particularly at the time of his election to the secretaryship of the A. M. A. and as editor of *The Journal* he was held in high esteem.

We believe that Dr. Simmons' record in our own society, and in his present office, entitles him to encouragement and support in this crisis from the Nebraska State Medical Association and from all fair-minded physicians everywhere.

Adopted by unanimous vote.

**RESOLUTION ADOPTED BY THE COUNCIL OF THE
CHICAGO MEDICAL SOCIETY, MAY 11, 1909.**

Resolved, That the Council of the Chicago Medical Society records its confidence in Dr. George H. Simmons; that it expresses its admiration for the man, who, beginning as a sectarian practitioner, has been able to render the distinguished service to the whole medical profession that he has rendered, and that it approves of the spirit of the movements for the advancement of the medical profession which, as editor of *The Journal of the American Medical Association*, he represents.

**THE ATLANTIC CITY SESSION OF THE
A. M. A.**

The sixtieth annual session of the American Medical Association will be held in Atlantic City June 8-11. No better place could have been selected, as the membership of the Association is now so large that few cities have sufficient accommodations to care comfortably for all of those who attend an annual session, and Atlantic City, with her hundreds of hotels and boarding houses, offering accommodations to suit every purse, is amply able to care for the largest gatherings. The remarkable feature is that the thousands of visitors who are constantly in Atlantic City can be properly cared for in a comparatively small area, owing to the fact that the famous board walk on the ocean beach is lined with essentially nothing but hotels.

As an indication of the ability of Atlantic City to care properly for great crowds it is only necessary to state that the permanent population

of the place is under 45,000, whereas during the height of the season in August of each year the population is increased to over 400,000, and this number of people is properly housed, fed and entertained.

The city is known as America's greatest resort, and its popularity increases year by year. The ocean and beach front, with its six miles of board walk, are the leading attractions. The board walk is unique. It consists of a steel structure, with pine flooring, elevated from five to fifteen feet above the beach, six miles long and twenty to sixty feet in width. On one side is an unobstructed view of the ocean and beach, while the other is lined by magnificent hotels, places of amusement and bazaars.

Probably no other city of its size has better railroad service than Atlantic City. The Pennsylvania, the Reading, the Jersey Central and the electric lines all maintain the finest equipment of their systems on their Atlantic City branches. The fastest express trains run at very frequent intervals, and of the thirteen fastest trains maintained in the world nine of them are scheduled on the Atlantic City systems.

For this year's session of the Association several special trains, made up in various parts of the United States, will be run through to Atlantic City without change. Indiana physicians will have the privilege of joining either of two A. M. A. special trains, one leaving St. Louis by the Big Four and going through Indianapolis, the other leaving Chicago by the Pennsylvania road and going through Fort Wayne. The passenger associations have granted a rate of a fare and a half, and tickets will be good on all special trains as well as the regular trains. Tickets will be good returning June 19. Those who go by the Pennsylvania lines may obtain a stop-over of ten days in Washington, Baltimore or Philadelphia on the return trip by requesting the same at the time the ticket is purchased. In Philadelphia a series of clinics at the various medical colleges and hospitals have been prepared for the visitors who will pass through the city going to and coming from Atlantic City.

The section programs published in *The Journal of the A. M. A.* May 1 indicate that a high grade of scientific work is in store for those who attend the meetings, and the present indications are that the attendance at Atlantic City will equal, if it does not exceed, that of two years ago at the same place.

Every medical man should afford the time and expense required to attend the sessions of the

American Medical Association. The meetings are not only a postgraduate course in themselves, but physicians should take advantage of the opportunity for much needed rest and recreation at a favorable season of the year. The fact that this year's session is to be held at Atlantic City, less than three hours' ride from such great medical centers as Philadelphia, Baltimore and New York, where special clinics have been arranged for visitors to the A. M. A. session, should offer sufficient temptation for any progressive medical man.

Indiana has always sent large delegations to the A. M. A. sessions, notwithstanding the fact that the session of the national association has followed close after the session of the state association. This year the Indiana State Medical Association holds its annual session in October, and that ought and probably will result in a larger attendance at the A. M. A. session as well as at the session of the state association.

INDIANA STATISTICS THE STANDARD.

It will be a matter of extreme satisfaction to the medical profession of our state to learn that the United States Census Bureau has accepted the mortality statistics of Indiana as a standard by which to gauge the accuracy of those of other states. This is certainly a justly-deserved compliment to the efficiency of our State Board of Health and one of which its capable secretary should be extremely proud. Surely there could be no severer test or more positive proof of the accuracy of data furnished than that applied by the national bureau, and we desire to offer our congratulations to the faithful and capable secretary, who by his indefatigable and painstaking efforts has won for our state this enviable position in the matter of vital statistics.

Doubtless, too, no little credit should be given to the various heads of the county and municipal boards of health, without whose best efforts and heartiest cooperation Dr. Hurty's task would be futile indeed. That they are doing their work well is attested by the fact that their chief has been able to accomplish what he has.

The State Legislature should also come in for its proportionate amount of credit, for the new Health Law is remarkable in the sweeping authority with which it clothes its health officers, as follows:

"It shall be unlawful for any person, firm, company or corporation to institute, permit or maintain any conditions whatever which may

transmit, generate or promote disease; and it shall be the duty of the health officers, upon hearing in any way of the existence of said unlawful conditions within their respective jurisdictions, to order their abatement in writing, if demanded, and specifying particularly wherein said conditions may transmit disease and naming the shortest reasonable time for abatement. Upon refusal or neglect of any person, firm, company or corporation to obey said order then the district prosecutor of the district wherein the offense occurs, upon receiving information from said health commissioners or health officers, shall institute proceedings in the courts for enforcement."

If properly supported by the courts this clause places the health authorities just where they should be, practically supreme in matters concerning the public health. With such power behind it and with the preliminary training that should be demanded of every candidate for public health office, it should require but a reasonable minimum of time for our public health and sanitary system of regulation to set the pace for the world.

We have been wont to look to Europe, Scotland and Germany in particular for pointers in municipal and governmental regulation in sanitary economics, and it is high time that the tide were turning this way, which it surely will when we vest the requisite power in men with like requisite training in this particular line of work. And, by the way, we believe this should be just as much the life work of the doctor who desires to enter its field as that of any other specialty. The office of a public sanitarian should be divested of all politics, compensation should be adequate, and capability should be the only measure of office tenure.

It now behooves the general profession of our state to lend its unstinted aid to the various health departments to maintain the enviable position already attained and, if possible, to elevate the standard still more. Let us be prompt with our vital statistics; let them be accurate and complete, and, in short, let us do everything in our power to make the life of our most worthy secretary both easier and longer.

STEWART AGAIN.

Verily the gall of the advertising quack at times becomes appalling, for now come the one-cent circular and advertising pamphlet of one "Dr." J. B. Stewart, now of Indianapolis, formerly of Shelbyville, Indiana.

Of course, this philanthropic gentleman is engaged in the business of "absolutely curing any drug or whiskey addiction" from purely humanitarian instincts, and his liberal-mindedness is evidenced by the proffered commission of \$25 to every physician who sends or brings a patient to the institution, a little peace offering and token of friendship tendered as a memento in recognition of the kindly offices of the referring physician in citing the patient to the right (?) place. Naturally, the patient, and not the eminent physician, being the beneficiary of these kindly offices of the family physician, with whose "general practice Dr. Stewart never interferes," it is but fair that the patient should contribute this \$25 along with \$100 for the *guaranteed cure* which he receives. And there is little use to question the value of the *guarantee* because this wonderful and secret cure was never known to fail. Indeed a perusal of the circular impresses one with the fact that he is derelict in his duty to his fellow-men if one does not seek out among his unfortunate brethren those in need of this wonderful treatment and urge upon them to go thither at once and be cleansed. Then, too, there is the important addendum in the summary of merits, that this treatment leaves no bad after-effects; "when the patient is sent away cured he is free from pain (likewise his one twenty-five—Ed.), nervousness, and can eat and sleep like a healthy child." This truly is wonderful, for when most snakes find themselves fleeced out of a hundred or more they don't suffer from an excess of somnolence for the first day, nor is the taste in their oral cavity exactly similar to that degree of gustatory happiness that characterizes the well child. If the patient has originally suffered from "stomach or liver troubles, rheumatism, asthma, gallstones or chronic diseases," we can rest assured that he will at least not be made worse by the treatment. Truly the modesty of the "doctor" is commendable and he deserves great credit for not inflicting the physical torments of the damned upon our patient while he is producing traction upon the off leg (and near purse).

As the strictest confidence and secrecy attend the relation of the institution and its patrons, a list of patients is not appended. However, if desired, you can be put in communication with that class of reference (*sic!*).

The benignant aspect of the accompanying portrait of the eminent specialist and the imposing list of references of "reputable citizens" of Shelbyville should attest sufficiently for the most

skeptical to the sterling worth of the institution, provided investigation were not carried too far.

Will such rank charlatanism ever cease? And this poor benighted soul who is so solicitous of the welfare that he deputizes the honest practitioner to assist him in his philanthropic work (at so much per), does he believe for one moment that his talk appeals to any rational practitioner? What consummate nerve is required to ask a conscientious doctor who would gladly give to his fellow practitioners the details of any treatment that had in his hands proved its worth —what gall to ask such doctor to recommend to his patients a rank graftor who claims to have the only known formula for their cure!

EDITORIAL NOTES

SEVERAL Indiana physicians who drive automobiles have been sued for damages arising as a direct result of injuries to property or persons occasioned by the automobile or the manner of its operation. We believe that it is good policy for every owner of an automobile to carry automobile liability insurance. The automobile driver is less often at fault than the person who brings suit for damages, but, as courts and juries are notoriously unfriendly to the automobilist, it is prudent for the automobilist, even though he be extremely careful in operating his car, to protect himself by carrying liability insurance.

It is with pleasure that we acknowledge the receipt of the 1909 bulletin of "Minimum Requirements for the Medical Colleges and Medical Students to be Accounted in Good Standing by the Indiana State Board of Medical Registration and Examination." Its perusal convinces one of the effort on the part of the board to keep up the standard in Indiana both for her colleges and her students, and we trust that the time is not far distant when at least two years' college preparatory work will supplant the present minimum requirement of a diploma from an accredited high school, a thing already being demanded by several schools.

The board is to be congratulated upon its contemplated method of practical examination with which it is credited in a recent editorial in *The Journal of the American Medical Association*.¹ Already the method is in vogue in Ohio and Massachusetts, and it is announced that Minne-

1. Jour. A. M. A., April 24, 1909, p. 1339.

sota and Indiana will soon follow. In addition to the written examinations, students will be required to undergo practical tests in histology, pathology, bacteriology and urinary analysis. Such a regime is expected to, and should readily differentiate between, the trained laboratory and clinical applicant and him who has failed to put his text-book work to practical application.

Concerning the elimination of the rash often following the administration of diphtheria antitoxin, the following is taken from the April 17th, 1909, issue of *Collier's Weekly*:

"Recently an unannounced discovery has been made by Dr. Banzhaf of the Laboratory of the Department of Health in New York City that will result in an alteration in diphtheria treatment. The discovery is a notable gain in the elimination of the non-antitoxin substances in diphtheria antitoxin solution. Rashes have been apt to break out on the skin of the diphtheria patient after the antitoxic treatment. This unsightly and painful after-effect has tended to make the treatment unpopular with the ignorant. Dr. Banzhaf heats the diphtheria serum for eighteen hours at a temperature of 7 degrees. As a result twenty per cent. more of the insoluble substances leading to the patient's breaking out are eliminated. By a fortunate chance experiment in another direction Dr. Banzhaf happened on the discovery. He tested it on guinea pigs and found that a serious retardation in diphtheria treatment had disappeared. Quietly, by letter and conversation, the news has spread, and the method is being adopted in various cities."

Some of the medical journals are suggesting that the American Medical Association should grant a pension of at least one hundred dollars per month to Dr. W. B. Atkinson, formerly secretary of the Association, who is reported as living in comparative poverty in advanced age. We believe it to be the duty of the medical profession to extend charity to Dr. Atkinson or any other physician who has served his profession and the public honorably and well, but we are unalterably opposed to the granting of pensions from the treasury of the A. M. A. to any one, and for the reason that such a procedure would establish a bad precedent and certainly lead to embarrassing situations in the future. If one honored member of the A. M. A. is to have a pension why may not others have a pension? And while we are dipping into the A. M. A. treasury, why

not appropriate something to widows and orphans of medical leaders who have been honored, respected and loved? We have no hesitation in saying that it is no credit to the medical profession if Dr. Atkinson is living in comparative poverty. The friendship and loyalty of the medical profession to one of its honored members should be shown in a substantial way, and the last days of Dr. Atkinson should be made more comfortable through assistance from the profession, but let that assistance go to him in a way which will not place the A. M. A. in a position whereby other similar demands could scarcely be refused. Let the immediate friends and confreres of Dr. Atkinson appeal to medical men individually, and we believe that a fund will be quickly raised which will insure him a comfortable income throughout the remaining years of his life.

CORRESPONDENCE

LET US SAVE 200 LIVES THIS YEAR FROM MENINGITIS.

Editor The Journal:—Meningitis kills an average of 450 persons every year in Indiana. Dr. Flexner of the Rockefeller Institute has discovered a serum which cures the disease. This serum has been well tested; it is harmless and no dangers attend its administration. Its use will reduce the death rate over one-half; this result has been repeatedly obtained. The Flexner anti-meningitis serum is not yet for sale on the market, but can be obtained free by any practitioner who will apply to Dr. W. D. Hoskins of Indianapolis or to Dr. Homer Wooley of Bloomington. Both of these physicians are professors in the medical department of the Indiana University. The Rockefeller Institute, endowed with \$10,000,000 by Mr. Rockefeller, was created for the purpose of studying and investigating infectious and contagious diseases. This triumph over meningitis is of vast import to the world. Doubtless the state will eventually supply this serum free to the poor, as it now supplies diphtheria antitoxin. The strong will be glad to pay for it. The discovery, like all great scientific discoveries, is free to the world.

To save 200 lives from meningitis in Indiana the coming year the people must not only permit the use of the anti-meningitis serum, but must demand that it be used. It is to be hoped that its use will not be delayed, as was the case with diphtheria antitoxin.

J. N. HURTY.

DEATHS

LEONIDAS O. P. WOLFE, M.D., Rush Medical College, Chicago, 1866, of Mauckport, Ind., died suddenly at the home of his brother at that place March 30, aged 67.

DR. JOSEPHUS DAVIS, Western Reserve University, Cleveland, 1860, at one time mayor of New Carlisle, Ind., died at his home in that place April 18 from pneumonia.

DR. WILLIAM H. SHAFFER, Starling Medical College, Columbus, Ohio, 1881, formerly of Columbus, died in Elkhart, Ind., April 4 from tuberculosis of the kidney, aged 65.

DR. ELI GILLMORE McDIVITT, Miami Medical College, Cincinnati, 1873, of Richmond, Ind., died in the Reid Memorial Hospital in that city April 18 from senile dementia, aged 62.

DR. WILLIAM H. SCHULTZ died at his home in Lebanon, May 6, following an attack of la grippe. He was born near Lebanon, in 1840, and served in the Civil War. He was a graduate of the Indiana Medical College and the Chicago Medical College.

DR. JAMES P. DEBRULER, a surgeon on the United States battleship *Paducah*, died at San Juan, Porto Rico, May 6. Dr. DeBruler was born in Evansville, and was the son of the late Claude DeBruler, who for a number of years was publisher and editor of the *Evansville Journal*.

J. W. BATES, M.D., of Broad Ripple, died of pneumonia on May 3. About three months ago his wife, Mrs. Birdie Bates, died of ptomaine poisoning, which caused to some extent his lowered state of vitality preceding the attack of pneumonia. Dr. Bates was born in Castleton, Ind., Aug. 9, 1857. He graduated from the Ohio Medical College at Cincinnati, and has been practicing medicine in Broad Ripple since 1883. He has been of great assistance in the improvement of his home town, having served on the town board for several years.

PERSONALS

DR. E. MASAGNA has resumed his practice in Vincennes after a year in Europe.

DR. J. C. KELLY, of Mitchell, sailed for London April 28, where he will take a postgraduate course.

DR. AND MRS. C. S. GOAR, of Indianapolis, have returned from a several weeks' trip in Texas.

DR. J. C. WALLACE, of Fort Wayne, has moved from 631 Washington Blvd., to 207 W. Creighton Ave.

DR. AND MRS. GEORGE L. GREENAWALT, of Fort Wayne, left May 10 for a four months' visit in Europe.

The physicians of Vincennes have adopted a new fee bill, signed by practically every physician in the city.

DR. EUGENE BUEHLER, City Sanitarian, and DR. AMELIA KELLER have removed their offices to 417 Indiana Pythian Bldg., Indianapolis.

DR. D. C. RIDENOUR, of Peru, Secretary of the Miami County Medical Society, has been ill with pleuropneumonia, from which he is now recovering.

DR. S. E. EARP, of Indianapolis, delivered an address at the anniversary reunion and banquet of "The Plato Society," which was held at Mc-Kendree College on April 21.

DR. GEORGE F. EDENHARTER, superintendent of the Central Hospital for the Insane, Indianapolis, was reelected for a term of four years March 26 and the board adopted resolutions laudatory of his work.

DR. L. E. BROWN, of Fort Wayne, left May 1 for Fredericktown, Md., where he will locate in the practice of medicine. For a time Dr. Brown will be on the staff of the St. Christopher Hospital at Philadelphia.

DR. GEORGE F. EDENHARTER was reelected as superintendent of the Insane Hospital at Indianapolis by a unanimous vote of the board of trustees. He also was the recipient of a eulogistic resolution from them on account of his excellent management.

DR. F. G. JACKSON, of Muncie, has been appointed on the Board of Pension Examiners at Muncie, vice, Dr. J. S. Coffman. This is Dr. Jackson's second service, having been appointed in 1897 and serving nine years.

DR. A. T. GRAHAM, who for the past eight years has been assistant superintendent of the Methodist Hospital of Brooklyn, N. Y., has been selected as the new superintendent of the Methodist Hospital, Indianapolis, by the Board of Directors. Dr. De Loss M. Wood still continues as the field secretary.

DR. JOSEPH A. STUCKEY, of Lexington, Ky., was the guest of the Indianapolis Eye, Ear, Nose and Throat Society Monday evening, April 5. This society meets once every two months and this time at the residence of Dr. L. Page, 1604 N. Penn St. Dr. Stuckey gave an excellent address on the mishaps and errors of the special surgery on the eye, ear and throat.

DR. CHARLES E. WRIGHT, who formerly practiced medicine in Indianapolis, with Dr. Frank Morrison, demonstrated his talent as an actor before several large audiences at the English Opera House, where he appeared as one of the leading characters in Henry Savage's New York production of the "Merry Widow." There was a large theater party given by the Indianapolis physicians for the first performance as a compliment to Dr. Wright.

THE Board of Directors of the Deaconess Hospital have selected the following students of the senior class of the Indiana University School of Medicine for their new internes: Dr. Ferdinand Weyerbacher, who has been an interne at the Fletcher's Sanitarium, his home being in Boneville; Dr. Charles M. Cain, of Connerville; Dr. C. R. Clark, who has been a student in Dr. J. H. Ford's office, and Dr. John Davis. The re-

tiring internes are Dr. R. J. Kemper, Dr. J. A. Leas, Dr. F. W. Dunn and Dr. Charles Cabalzei, all of whom expect to locate in Indianapolis.

THE new internes in the Methodist Hospital are Dr. E. C. Kyte, of Seymour, Ind., who has been externe for the past year; Dr. C. R. Strickland, of Greenfield, Ind., and Dr. L. H. Maxwell, of Indianapolis. Dr. Kyte has already begun his work. Dr. Strickland will commence June 1 and Dr. Maxwell June 15. Dr. Harry Bond, who soon completes his internship there, will leave for New York to do postgraduate work, after which he will locate in Indianapolis. Dr. A. L. Hirshberger, who has completed his internship there, will go to New York this fall for postgraduate work after a vacation trip to his home in El Paso, Tex., as well as several other cities in that state.

THE new internes at St. Vincent's Hospital, of Indianapolis, have been selected. They are all graduates of the Indiana University School of Medicine and will take their places the first of June. They are: Dr. Alfred Porter, of Terre Haute; Dr. Carl Habich, of Indianapolis, and Dr. John Kingsbury, of Indianapolis. The internes who will be relieved are: Dr. Herbert Wagner, who will spend a year in postgraduate work in Berlin and Vienna; Dr. Robert Dwyer, who, after a postgraduate course in New York city, will return to Indianapolis for location, and Dr. Stephen Egart, who will locate in Indianapolis about Aug. 1.

EACH year the Eli Lilly Co., of Indianapolis, entertain the graduating class of the local medical college, and also the graduating class of the Purdue School of Pharmacy, at Lafayette. This year the pharmacy class was accompanied by Prof. A. L. Green, dean of the school, and Prof. Arthur Carter. In addition to the pleasure of the trip they had the enjoyment of a banquet at the Claypool. The Eli Lilly Co. is one of the leading institutions of the city of Indianapolis, employing over seven hundred people. The writer had the pleasure of inspecting their physiologeal laboratory recently, which he found as fully equipped to do good work as the laboratory of the "Pasteur Institute" in Paris. He also enjoyed watching one of their new machines, which turned out three hundred thousand tablets in one day.

NEWS, NOTES AND COMMENTS

The Ninth District Medical Society will hold its annual session at Noblesville May 20th. Henry A. Alburger, Professor of Pathology at the State University, will be the guest of honor.

DR. BRANSFORD LEWIS, of St. Louis, gave a clinic at the Indiana University School of Medicine Hospital on May 5 on the Diagnostic Value of the Cystoscope. A large number of physicians from the city enjoyed his visit.

The Academy of Medicine, Elkhart, has been incorporated without capital stock for educational and social purposes by Drs. I. Wright Short, Fred N. Dewey, George W. Spohn, John C. Fleming and A. A. Norris.

The graduating exercises of the Indiana University School of Medicine will be held in Bloomington June 23, the date of the graduating exercises of the arts and law departments of the university. President David Starr Jordan, M.D., Indiana Medical School, 1875, will give the commencement address.

SOME time ago the St. Vincent's Hospital purchased the summer resort at Indianapolis known as Fairbank. Plans have been drawn by D. A. Bohlen & Sons for a complete and modern hospital in every respect. Work will commence on the same by June 1 and within one year the new hospital will be ready for occupancy. The Board of Park Commissioners of Indianapolis has purchased a strip of land fifty feet wide of the St. Vincent's Hospital site in order to complete their boulevard along Fall Creek.

ON THURSDAY and Friday, May 20 and 21, the annual meeting of the health officers of the state will be held in the palm room of the Claypool Hotel, Indianapolis. Dr. Hurty has promised them a magnificent array of talent, probably the best speakers on sanitation in the United States. Drs. Ravenal, Woods, Hutchison, C. A. L. Reed, and others will give addresses. Arrangements are also being made to give the distinguished visitors a reception, with the Indianapolis Medical Society as host.

A SPECIAL Pullman car on the train leaving Indianapolis at 7:10 p. m. Saturday, June 5, has been assigned to the physicians and their wives who have to be in Atlantic City on Monday, June 7. For those who wish to arrive at Atlantic City in time for the Tuesday morning session a special car leaving by the same road has been provided on the train leaving Indianapolis at 3:05 p. m. Sunday, June 6. This car will go through to Atlantic City without change. The car leaving Saturday evening will arrive in Philadelphia Sunday afternoon at 3:15 o'clock, where a change will have to be made for Atlantic City. If sufficient physicians wish to leave Indianapolis on Sunday afternoon a special train will be provided, starting out of St. Louis Sunday morning.

AT A recent meeting of the faculty of the Indiana University School of Medicine a unanimous report of the advisory committee was made recommending that one year of collegiate work in 1909 and two years of collegiate work in 1910 be required for entrance in the School of Medicine. The report was unanimously adopted by the faculty. This new requirement is in conformity with the rules and regulations of the Association of American Universities and the National Association of State Universities, to the effect that all members of these Associations must require two years of collegiate work for entrance in their professional schools in 1910. This means that all of the University Medical Schools from Maine to California will have this requirement next year.

AN Indianapolis chapter of the Nu Sigma Phi Fraternity, the only organization of its kind in the world, which is composed entirely of women physicians and women medical students, was organized May 3, at the Denison Hotel. Dr. Cora W. Carpenter, of Indianapolis, who is about to go to Tabriz, Persia, as a medical missionary, assisted in the organization of this chapter. Dr. Irena Robinson Pratt, of Chicago, was the guest of honor in the installation. Among the women physicians who were taken into the fraternity were Drs. Amelia Keller, Helen Knabel, Marie Haslep, Urbana Spink and Gertrude Morse. Young women students of the Indiana School of Medicine were the Misses Lillian Mueller, Elizabeth Bacon, Blanche Horner and Nellie Hanaway.

Dr. Fred Prow of Bloomington was appointed a member of the State Board of Dental Examiners, to serve two years from June 1, 1909. It was ordered that the Annual Health Officers' School be held in Indianapolis, May 20-21, and that the secretary prepare a program, the same to be approved by the president. It was ordered that a conference of the State Board of Health with the dairymen of the state be held at a date to be fixed by the president and secretary in the fall, and that the State Food and Drug Commissioner should prepare a program.

The president and secretary were appointed a committee to report to the board with recommendations the order, method, and forms of blanks for holding examination of applicants for the position of health officers as commanded in the new health law.

A COLONY for incipient cases of tuberculosis has been established on the city hospital ground of Indianapolis. Four cottages have been built by the Indiana branch of the "American National Red Cross Society," and several others have been contributed by societies and individuals. Ground has been purchased and six cottages are now completed. Each cottage is intended for one individual and has ample openings to the outer air, with a pleasant porch to protect them from the sun's rays. Patients will be received through the tuberculosis clinic of the Bobbs Free Dispensary and will be treated by physicians from that institution. One cottage will be used as a dining room and store for medicines and supplies. Any society or institution which presents a cottage has the control over the patients received in that cottage. Several labor unions are contemplating the erection of cottages for their own members.

THE official program for the Atlantic City session of the A. M. A. contains the names of the following Indiana physicians: Dr. Miles F. Porter, Fort Wayne, trustee; Dr. J. N. Hurty, Indianapolis, Vice-Chairman of Section on Hygiene and Sanitary Science; Dr. Albert E. Bulson, Jr., Fort Wayne, Secretary of Section on Ophthalmology; Drs. W. N. Wishard, Indianapolis; Edwin Walker, Evansville; G. W. Thompson, Winamac, and Harry Sharp, Indianapolis, members of the House of Delegates; Dr. David W. Stevenson, Richmond, to read a paper before the Section on Ophthalmology on "Unreliability of Astigmatic Fan or Clock Dial Test"; Dr. L. D. Brose, Evansville, to read a paper before the Section on Ophthalmology on "Lacrimal Gland

Tumors"; Dr. Harry C. Sharp, Indianapolis, to read a paper before the Section on Hygiene and Sanitary Science on "Vasectomy as the Means of Preventive Procreation in the Defectives." The following Indiana firms will have commercial exhibits at the Atlantic City session: W. D. Allison, Indianapolis; Clark and Roberts, Indianapolis; Fouts and Hunter Carriage Manufacturing Company, Indianapolis.

THE Indiana University School of Medicine has added a fifth year to the curriculum, beginning with the session of 1909-1910. Until further notice the work of this year is optional and consists of

A. Graduate work in one of the seven departments of the School of Medicine, or

B. A hospital or dispensary internship under the following conditions

1. The hospital in which the internship is served must be approved by the faculty.

2. In addition to the regular duties of an interne, the candidate will be required to prepare a thesis necessitating an exhaustive study of a selected group of clinical cases involving original work. This work shall be under the immediate supervision of one or more members of the faculty selected by the educational committee.

3. Evidence of thorough clinical work must be presented, the thesis shall be read, and a special examination must be passed before a committee of the faculty.

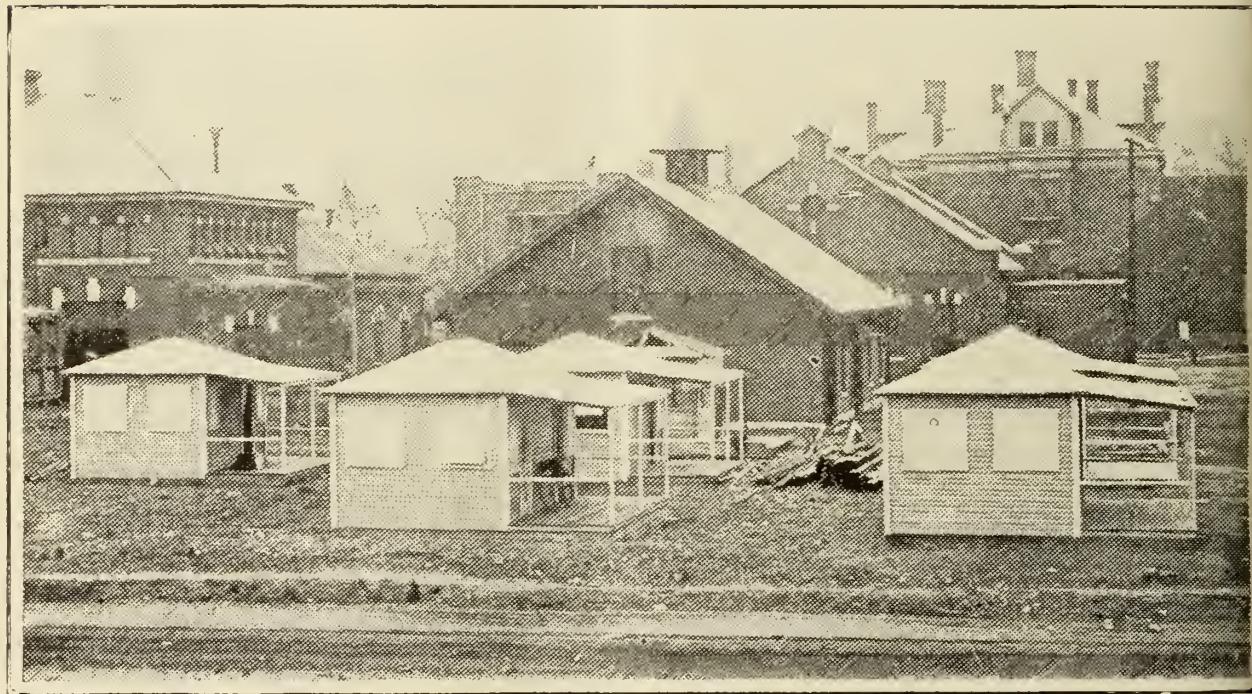
On the successful completion of the fifth year the candidate will be recommended by the faculty for the degree of doctor of medicine, cum laude.

THE cottages of the Tuberculosis Colony on the City Hospital grounds, Indianapolis, have been patterned after the cottages of the Rockwood Sanitarium, and are 12 feet long and 10 feet wide, with four window openings, three feet by three feet. No glass or sash is used in the windows and only a canvas covering is provided, which is attached to the top and can be used as an awning in case of rain. There are three small openings 3 feet by 1½ feet, and also one glass door. The cottages are floored over a six-inch concrete foundation and have a tiled hip roof, with rubberoid covering. The floor as well as the entire cottage inside and out, is covered with two coats of paint, of a character that can be easily washed. A porch 6 feet wide extends the entire length of the cottage on the south side. Heat is provided by the use of base burner. Dining, bath-

ing and toilet facilities are provided in one six-room cottage for the use of all. Each 10 by 12 cottage costs \$62, which includes everything. The following have each given one cottage, on which will be placed a memorial tablet designating the donor: All Soul's Church, St. Bridget Academy, the bible class of the Second Presbyterian Church, Mrs. Dr. Rowe, in memory of her father, and Mayor Bookwalter, in memory of his brother. The Cigarmakers' Union expects to provide three or four cottages, and all of these are in addition to the four built by the Indiana Branch of the National Red Cross Association.

cerning the tuberculin testing of milk cows. The secretary, in answer to petitions from the people, made twenty visits, and reported epidemics of scarlet fever in mild form in nine localities and epidemics of measles in many parts of the state. Typhoid fever and smallpox showed a decrease over the corresponding quarter in 1908. Eighteen schoolhouses, which were inspected because of petitions from patrons, were condemned as unsanitary and ordered not to be used hereafter for school purposes.

The following orders concerning the enforcement of the pure food law were passed:



COTTAGES OF THE INDIANAPOLIS TUBERCULOSIS COLONY.

Illustration loaned to us by the *Indianapolis Star*.

THE regular quarterly meeting of the State Board of Health was held Friday, April 9. The commissions of Dr. W. N. Wishard and Dr. F. A. Tucker, appointed to succeed themselves, for the succeeding four years, were received. Dr. George T. McCoy was elected president for the ensuing two years and Dr. W. N. Wishard was elected vice-president. The secretary's report told in detail of the work of the board for the quarter ending March 31 and made of record the history of the passage of the new health law, the law concerning the prevention of the pollution of streams, the law governing the sanitation of food-producing establishments and the law con-

ORDER No. 1.—*Subject—Bleached Flour.*
To the Millers and Flour Merchants of Indiana:

The controversy over the bleaching of flour by nitrogen peroxid has been finally settled by Food Inspection Decision No. 100, issued by James Wilson, Secretary of Agriculture, and the manufacture and sale of bleached flour in the District of Columbia and the Territories and its transportation for sale in interstate or foreign commerce prohibited after June 9, 1909.

The Indiana Food Law contains the same provisions applying to bleached flour as the Federal Food Law.

According to an order of the State Board of Health issued April 9, 1909, you are hereby ad-

vised that the sale of flour bleached with the oxids of nitrogen is in violation of the law and that such sale will be contested on and after June 9, 1909, except in cases when the barrel, bag, sack or other receptacle has on its head or side as a part of the principle label the words, "Bleached Flour," in plain black Gothic letters, at least one inch in height.

State Food and Drug Commissioner.

Approved April 9, 1909.

GEORGE T. MCCOY,
President State Board of Health.

J. N. HURTY,
State Health Commissioner.

ORDER No. 2.—Subject—Alum in Pickles.

To the Pickle Manufacturers, Wholesale and Retail Grocers of Indiana:

According to an order of the State Board of Health issued April 9, 1909, you are hereby advised that the manufacture for sale within this state or the sale of cucumber, onion or other pickles prepared with alum is in violation of the Pure Food Law of March 4, 1907, and that such manufacture and sale will be contested on and after Sept. 1, 1909.

State Food and Drug Comissioner.

Approved April 9, 1909.

GEORGE T. MCCOY,
President State Board of Health.
J. N. HURTY,
State Health Commissioner.

ORDER No. 3.—Subject—Sidewalk Display of Foodstuff.

To the Wholsale and Retail Dealers in Food Products of Indiana:

Section 2 of Chapter 163 of the Acts of 1909 regulating the sanitary production and distribution of food reads in part as follows:

"For the purpose of this act unclean, unhealthful or unsanitary conditions shall be deemed to exist if food in the process of manufacture, preparation, packing, storing, sale, distribution or transportation is not securely protected from flies, dust, dirt, and, as far as may be necessary by all reasonable means, from all other foreign or injurious contamination."

The custom of displaying such products as fruits and vegetables on the sidewalk or outside the place of business is clearly prohibited under the law unless such goods are securely protected from flies, dust, dirt and all other possibilities of contamination.

In order that this provision of the law may be clearly understood the State Board of Health on April 9 issued the following order:

Fruits, vegetables, and other food products must not be displayed or stored on the sidewalk or outside the place of business unless they are securely covered by cases of glass, wood, or metal or enclosed in tight boxes, bags or barrels, and all such cases or containers shall be raised at least two feet above the sidewalk. The practice heretofore followed of covering small fruits with screens or nettings is not a sufficient compliance with this order. This order shall not, however, apply to fruits and vegetables which have to be skinned or peeled before use and which are stored in tight barrels, boxes or crates.

State Food and Drug Commissioner.

Approved April 9, 1909.

GEORGE T. MCCOY,
President State Board of Health.
J. N. HURTY,
State Health Commissioner.

ORDER No. 4.—Subject—Unprotected Food-stuffs.

To the Wholesale and Retail Dealers in Food Products of Indiana:

Section 2 of Chapter 163 of the Acts of 1909, regulating the sanitary production and distribution of food, reads in part as follows:

"For the purpose of this act unclean, unhealthful or unsanitary conditions shall be deemed to exist if food in the process of manufacture, preparation, packing, storing, sale, distribution or transportation is not securely protected from flies, dust, dirt, and, as far as may be necessary by all reasonable means, from all other foreign or injurious contamination."

In order that all dealers, including grocers, makers, confectioners, restaurant keepers, saloon keepers and other persons engaged in the sale of foodstuffs may understand the application of this section of the law, the State Board of Health, on April 9, 1909, issued the following order:

No prepared foodstuffs, such as baker's goods, confectionery, shelled nuts, etc.; dried fruits, such as dates, figs, peaches, prunes, apricots, etc.; cereal products, such as tapioca, breakfast foods, noodles, etc.; pickled products, such as pickles, chili sauce, chow-chow, etc.; fruit products, such as apple butter, jellies, jams, etc.; meat products, such as dried, salted or smoked fish, veal loaf, pickled pigs' feet, mincemeat, chipped beef, boiled ham, etc., or other foods prepared for eating or subject to attacks of worms or flies shall be displayed for sale unless protected from flies, dust, dirt and all other foreign or injurious contamination by suitable coverings of glass, wood or metal.

This circular letter is supplementary to Rule 17, dated April 10, 1907.

State Food and Drug Commissioner.

Approved April 9, 1909.

GEORGE T. MCCOY,
President State Board of Health.

J. N. HURTY,
State Health Commissioner.

ORDER NO. 5.—*Subject—Sausage and Meat Products.*

To the Butchers and Meat Dealers of Indiana:

The State Board of Health has instructed me to call your attention to the fact that the use of a "binder," "filler," or material composed of starch, potato flour, or cereal product in sausage, hamburger steak, canned meat or other meat products (except meat loaf) is in violation of that portion of the Pure Food and Drug Law included in Section 2, Chapter 104, Acts 1907.

Sausage and other meat products (except meat loaf) which contains such "binder," "filler," or any form of cereal product cannot legally be sold unless the package is plainly marked in black Gothic letters at least one-fourth of an inch in height, "Sausage with Cereal Added," "Potted Meat with Cereal Added," etc.

Attention is also called to the fact that under the same section of the Pure Food Law the addition to sausage of water in excess of the amount present in the meats from which it is prepared when in a fresh condition is illegal.

The manufacture and sale of sausage and meat products herein referred to which contain either "filler," "binder," cereal products or added water will be contested on and after May 1, 1909.

State Food and Drug Commissioner.

Approved April 9, 1909.

GEORGE T. MCCOY,
President State Board of Health.

J. N. HURTY.

State Health Commissioner.

SOCIETY PROCEEDINGS

INDIANA STATE MEDICAL ASSOCIATION.

The following is a list of the doctors who have paid dues to the Indiana State Medical Association since April 10, 1909:

ALLEN COUNTY. FORT WAYNE

Dr. R. M. Bolman.
Dr. Edward Kruse
Dr. A. H. Maebeth
Dr. C. J. Rothschild

BENTON COUNTY. OXFORD

Dr. Robert Lee

EARL PARK Dr. Carl McCashlin

DELAWARE COUNTY. GASTON

Dr. W. P. Mitchell

FOUNTAIN COUNTY. STONE BLUFF

Dr. C. E. Mayfield

NEWTON
Dr. Wm. V. Stansfield

HENDRICKS COUNTY.
CLAYTON
Dr. D. M. Reynolds

LAKE COUNTY. H. AMMOND

Dr. L. H. Kelley
Dr. F. W. Smith
Dr. T. B. Templin
Dr. J. E. Metcalf
Dr. E. E. Geisel
Dr. C. A. De Long

MARION COUNTY.

Dr. E. O. Little, Hume,
Ill. (belongs to Marion
County Medical
Society).

INDIANAPOLIS

Dr. C. O. Durham
Dr. John A. Pfaff
Dr. C. E. Ferguson
Dr. D. W. Layman
Dr. A. S. Jaeger
Dr. E. A. Willis
Dr. W. H. Foreman
Dr. A. J. Schneider

Br. J. H. Bull
Dr. Caroline Reed
Dr. J. W. Little
Dr. W. F. Molt
Dr. B. J. Terrell

RANDOLPH COUNTY. UNION CITY

Dr. L. G. Cromer
Dr. C. S. Evans

FARMLAND Dr. John Nixon

SULLIVAN COUNTY. CARLISLE

Dr. G. W. Pirtle

VANDERBURG COUNTY.

EVANSVILLE

Dr. S. I. Green
Dr. G. E. Jones
Dr. C. L. Seitz
Dr. G. W. Tepe
" G. M. Young
Dr. L. Heimann
Dr. E. J. Laval
Dr. J. F. Glover
Dr. H. N. Gottmann

ALLEN COUNTY.

FORT WAYNE MEDICAL SOCIETY.

(Meeting of March 30, 1909.)

Society met in regular session in the Assembly Room with twenty-seven members present.

Double Ovarian Dermoid. Clinical case report by Dr. B. Van Sweringen. Patient, women, 28 years of age, from whom he had removed both ovaries which were the seat of dermoid cysts. Patient had been under his care in 1902 for chlorosis. Blood examination at that time showed 53 per cent. of hemoglobin, while cellular content was about normal. Under iron hemoglobin rose to normal in three months. In 1904 she was fitted with a pessary for retroflexion of uterus, but at that time a vaginal examination did not disclose any marked enlargement of the ovaries. Menstrual periods irregular, and was thought to be pregnant two months before consulting Dr. Van Sweringen, as small clots were passed. Was curedt. A week previous to his examination had sudden severe pain in lower abdomen, not accompanied by nausea or vomiting, but this, together with mass in left pelvis, suggested ectopic gestation, and patient was taken to hospital for operation (laparotomy). An interesting question in connection with the case is the relationship of the dermoids (which are congenital tumors) and the chlorosis of seven years ago. V. Noorden and Immelman emphasize this relationship, and reserve the name chlorosis for disturbances of blood formation which proceed from the sexual organs.

Prolapse of the Kidney was the title of a paper by Dr. E. J. McOscar, in which he took up the question of anomalous positions of the kidney, mentioning pelvic kidney. Gave technique for replacing prolapsed kidney as advocated by Golet.

Discussion by Drs. C. E. Barnett, Porter and McOscar.

Dr. Guy A. Smith spoke on the substitution of rapid bromid paper for plates in radiography. Claims to points of advantage: Cost of work markedly reduced, also gives better chance of filing pictures; can show patient or friends the results of exposure in short time (five or ten minutes). As to disadvantages, this requires more time of exposure, and reprints can not be made. However, several prints can be taken at same sitting by using several sheets of paper superimposed on one another.

Discussion by Drs. Weaver, Drayer, B. Van Sweringen, Porter and Smith.

Adjourned.

J. C. WALLACE, Sec.

* * *

(Meeting of April 6, 1909.)

Society met in regular session in Assembly Room, with eighteen members present.

Secondary Carcinoma of the Liver.—Dr. L. T. Rawles presented a specimen of secondary carcinoma of the liver of a cat. Primary growth was in the pylorus of the stomach. Cat was 6 years old.

Discussion by Dr. Porter.

Calculi of Ureter.—Specimen presented by Dr. M. F. Porter. Calculi were removed at operation from male patient in his sixty-ninth year. Forty-seven years ago had first attack, giving clinical picture of kidney colic. Never passed a stone or had hematuria. On operation by the aid of forceps a large stone weighing 1380 grains was delivered. A smaller stone was also removed. This stone was carried forty-seven years, and is the largest stone ever delivered. The remarkable absence of sepsis in this patient is of interest.

Temperature was the title of a paper by Dr. L. T. Rawles, in which he took up the question of temperature in animals. Spoke of the variations in temperature and the influence of day and night. Gave symptoms and diagnostic significance of fever.

Discussion by Drs. B. Van Sweringen, Porter, Morgan, Buehman, MeOscar and Rhamy.

Digitalis was the title of a paper by Dr. E. E. Morgan, in which he said that from his reading of the subject there was no difference between the digitalis made from the first and second year leaves. Physiological method preferable for standardization, but neither the physiological or chemical method are sufficiently accurate. The action of digitalis on the vasoconstrictors gives it its diuretic action.

Discussion by Drs. Gross, Porter, Weaver, Drayer, Gilpin and Bruggeman.

The Board of Censors reported favorably on application of Dr. J. Frank Dinnen, and he was unanimously elected to membership in the society.

Adjourned.

J. C. WALLACE, Sec.

* * *

(Meeting of April 13, 1909.)

Society met in regular session in the assembly room, with nineteen members present.

Dr. Chas. R. Dancer read a paper on the **Review of Literature on Multiple Sclerosis**, with one case report. Patient, male child, age 14 years; condition first noticed at 11 years of age. Autopsy findings and microscopical examination confirmed the diagnosis of multiple sclerosis.

Opening the discussion, Dr. Beall said there are two types of this condition, cerebral and spinal. Also discussed by Drs. Van Buskirk and Weaver.

Epilepsy with Alcohol as the Etiological Factor was the title of a paper by Dr. W. W. Carey, in which he quoted statistics from a number of institutions for epileptics.

In the discussion Dr. Mouser said that beyond a doubt alcohol does so act upon the general vitality that the offering is given that unstable nervous equilibrium which by any crisis is precipitated a nervous breakdown, very frequently resulting in epilepsy. Discussed by Drs. G. Van Sweringen, Dancer, Beall and Buchman.

Committee on Rest Room recommended that the southeast room on the first floor of the Allen County Court House be selected as a woman's rest room.

Adjourned.

J. C. WALLACE, Sec.

* * *

(Meeting of April 20, 1909.)

Society met in regular session in the Assembly Room, with twenty-eight members present.

Clinical case reports. Dr. K. K. Wheelock reported case, woman, age 54, suppurative otitis. Uneventful course until three weeks ago, when she was awakened from sleep with ringing in ears, extreme dizziness and vomiting. This condition was acute for twenty-four hours, but passed off gradually. Three days later trouble repeated, and left ear discharged pus and blood. Diagnosis made of granulation tissue of the attic, and probably of antrum pressing on semicircular canal. Patient taken to hospital and mastoid opened, finding pus in large quantity. Dizziness disappeared following operation.

Case 2.—Man awakened by coughing and ringing in ears at 4 a. m., accompanied by vomiting, dizziness and absolute deafness. No perception of sound to tuning forks. Patient had similar attack two months before, which left him with facial palsy that gradually passed away. Diagnosis effusion and hemorrhage into semicircular canal. Put him on salines and mercurial inunctions, and he is gradually recovering his hearing. No redness or inflammation of nose, throat or ears. It is a question as to the underlying cause.

Dr. Porter reported the case of a child with chronic bone lesion, and said the chief interest in the case is that not all subacute and chronic bone lesions are tubercular. Patient, child with pseudo-ankylosis of knee joint. No history of injury. Pronounced globular tumor the size of a walnut at lower inner aspect of the femur. Had no fever while under observation, and tuberculin reaction was negative. Contents of tumor or abscess proved negative in so far as tuberculosis was concerned. Showed staphylococcus infection.

Case 2.—Patient with appendicitis brought in, with diagnosis of obstruction of bowels. On examination quite a tumor was found. On removal of the appendix found circumscribed attempts at obliteration of the appendix with inclusion of secretions and pus at two points.

Discussion by Dr. Havice.

Conservative Minor Surgery was the title of a paper by Dr. C. F. Kaadt. The author said the chances should be weighed thoroughly before amputating in compound fractures. The infection should be combated by thorough aseptic and antiseptic precautions. Drainage not to be used unless infection is present or there is danger of infection. For splints he uses roller bandage, adhesive plaster and wire.

Discussion by Drs. Weaver and Rosenthal.

Dr. H. V. Sweringen's article, "A Scrap of Clinical History of the Eighteenth Century," was read by Dr. Porter.

Drs. Wheelock, Gordon and Van Buskirk were appointed a committee to draft resolutions on Dr. Brown's departure for the East.

Adjourned.

J. C. WALLACE, Sec.

FRANKLIN COUNTY.

The Franklin County Medical Society met in regular session April 5, with 7 members and 4 visitors present.

Incipient Pulmonary Tuberculosis was the title of a paper by Dr. Glaser, in which he discussed the symptomatology, diagnosis and treatment. Discussion.

Dr. J. P. Simmons, Superintendent of the State Pathological and Bacteriological Laboratory, read a paper in which he urged the profession of Franklin County to make more frequent use of the State Laboratory as a means of diagnosis of obscure and difficult cases.

The election of officers resulted as follows: President, A. William Vogt, Oldenburg; vice-president, E. M. Glaser; secretary-treasurer, C. H. Mayfield; censors, Drs. Gregory and West.

Adjourned.

C. H. MAYFIELD, Sec.

* * *

Franklin County Medical Society met in regular session May 3 in the court house at Brookville.

Hemorrhage of the Uterus from Causes Other Than Labor was the title of a paper by Dr. Mull, of Oldenburg. Discussion by Drs. Preston, Glaser and Vogt.

At the next meeting, which will be the first Monday in June, Drs. West and Garrigues will read papers on "Eczema in Children."

Adjourned.

C. H. MAYFIELD, Sec.

KNOX COUNTY.

The Knox County Medical Society met in regular session April 13, with 19 members present. Dr. Smadel presented a clinical case, a negro, age 49, much emaciated, who showed a large pulsating tumor in the right sternoclavicular space. Diagnosis of aortic aneurism. Of particular interest is the rapid growth of the tumor, it being almost imperceptible 3 months ago, and at this time as large as a fetal head.

Diabetes Mellitus was the title of a paper by Dr. L. J. Downey, who discussed the symptomatology. Dr. S. C. Beard presented the treatment of this disease. Discussion.

The application of Dr. A. W. Meyers, of Monroe City, was read and submitted to the board of censors. Dr. L. O. Church, of Fritchton, was elected to membership.

Adjourned.

CHAS. S. BRYAN, Sec.

KOSCIUSKO COUNTY.

The Kosciusko County Medical Society held its regular meeting April 27.

President Dr. Burkett reported a case of premature labor with convulsions in which he had performed an instrumental delivery.

Dr. C. A. Daugherty, of South Bend, Councilor for the 13th District, in speaking of society work said that a good county society not only makes better doctors, but it helps them to be better, broadminded and more tolerant men. It not only does this for each of us, but a good, active county society increases the standing of the profession in the whole community. He reports that since the reorganization of five years ago nearly every county in the district has largely increased its membership and attendance, and general improvement prevails. Nearly every county has taken up the postgraduate work. He also spoke of the enthusiasm it might add if occasionally a number of men might be invited from an adjacent county to take part in some special society meeting. He made a special plea for a larger attendance at the district meetings.

Dr. Daugherty, in discussing diagnosis and treatment of tuberculosis of the joints, said that leucocytosis is not present in tubercular joints. There is a spastic condition of the muscles, which disappears under general anesthesia and returns as the anesthesia wears off. The treatment is the same as in incipient cases of pulmonary tuberculosis, with the added local treatment. The tendency of modern times is to give but little medicine. The local treatment, which seems to get the best results, is fixation (in any apparatus which will render the joint immobile) and traction to separate the ends of the bones and overcome the reflex contraction of the muscles. Operative treatment may be necessary, but should not be adopted hastily. A great many tubercular joints will get well under modern non-operative treatment, or comparatively well, leaving an ankylosed joint. There are probably too many operations done on tubercular joints without giving due attention to trying to cure them without.

Discussion by Drs. McDonald, Young and Haworth.

A vote of thanks was tendered to Dr. Daugherty.

Adjourned.

C. NORMAN HOWARD, Sec.

MIAMI COUNTY.

The Miami County Medical Society met in annual session in the Commercial Club Room, with 12 members and 1 visitor present. The subject of the City Hospital was again discussed, and a new committee appointed, as follows: Drs. Spooner, Yarling and Carter.

Election of officers resulted as follows: President, D. C. Ridenour, Peru; vice-president, R. G. Foust, Santa Fe; secretary, R. B. Carter, Peru; treasurer, J. O. Ward; censors, J. C. Fretz, Deedsburg; O. U. Carl and J. E. Yarling, Peru; delegate, J. O. Ward, and alternate, Jared Spooner, Peru.

The Relation of State Board of Health to the Public, was the title of an address by Mr. John Owens, Assistant Food Inspector and demonstrator of the State Board of Health. He said the purpose of the State Board of Health was threefold: (1) The inspection of the water supply and sewage over the state; (2) Inspection of foods and drugs; (3) Bacteriological examination of tissues, secretions and excretions of the body. He also said that any person who suspects that he has consumption, typhoid fever, etc., can apply in person or through his physician to the State Board of Health for an examination of his sputum, blood, etc.

A committee was appointed, consisting of Drs. Lynch, J. P. Spooner and Carter, to make an effort to bring the State Tuberculosis Exhibit to Peru in the near future.

Adjourned.

D. C. RIDENOUR, Sec.

PIKE COUNTY.

The regular meeting of the Pike County Medical Society was held April 8.

Clinical case reports. Dr. Abbott gave a report of a case of puerperal convulsions treated with Norwood's tr. veratrum, in the end obtaining pleasing results.

Dr. Kime reported a case of vesical calculi, with suprapubic lithotomy. Stone was found incysted in walls of bladder and was dissected, disengaged and removed. Size 2½ in. long by 1½ in. wide; weight 2½ oz. Discussion.

Dr. DeMott gave a very interesting talk on surgery of the bladder.

Resolutions were passed with reference to the death of Dr. E. G. Burlingame, of Oakland City, who was a member of this society.

Adjourned.

E. S. IMEL, Sec.

PORTER COUNTY.

The regular meeting of the Porter County Medical Society was held April 6, with President Powell in the chair.

A communication from the Fenger Memorial Society was read, and an assessment of \$1 per member was made to help commemorate the name of the great pathologist and surgeon.

A letter from Dr. G. W. H. Kemper, of Muncie, concerning the names of deceased members was read, and Dr. Evans, Carson and Letherman were appointed to gather and forward such information as is obtainable.

Diseases of the Pancreas was the title of a paper by Dr. Powell. The author maintained that pancreatic disease is not rare, though not very easy to diagnose at all times. He gave the laboratory test for it as the finding of penrose in the urine. Etiology: cholecystitis, gastritis and trauma. Treatment, largely surgical. When due to gall stone, drainage of the bladder. Dr. Powell cited a case that had been very obscure, but an exploratory operation had shown a cystic pancreas, which was drained, the patient making an uneventful recovery. Discussion.

Dr. Orrendorf, of Chicago, with his assistant, then gave a demonstration of the technique of obtaining the spirocheta pallida from the mucous patch of the living subject. Mounting and examining. To make the living spirilla visible requires a dark chamber in the stage of the microscope and a very powerful artificial light, which apparatus Dr. Orrendorf brought with him. All members present saw the living spirilla and also stained specimens, which were under another microscope and were a great help in recognizing the living ones.

Dr. Orrendorf said during the general discussion that the laboratory worker did not expect to make the diagnosis in such cases as pancreatitis, but to help confirm them with the aid of the clinical symptoms.

Adjourned.

G. R. DOUGLAS, Sec.

SPENCER COUNTY.

The Spencer County Medical Society met in regular session April 23. Minutes of previous meeting read and approved.

The Management of Natural Labor was the title of a paper by Dr. Eva J. Buxton, in which she discussed the preparations for mother and child and the Hospital management. Discussion.

Dystocia was the title of a paper by Dr. H. G. Weiss, in which he carefully presented all phases of the subject and the means of relief. Discussion.

President appointed a committee of Drs. Weiss, Lane and Allenbaugh to arrange for a banquet at the next meeting for all doctors and their wives; physicians who were non-members to be invited.

Adjourned.

H. G. WHITE, Sec.

VIGO COUNTY.

The Vigo County Medical Society met in regular session April 27. Dr. Shanklin lectured on the use and abuse of forceps, and Dr. McBride presented the subject of Cesarean section. Dr. Bell reported a case of myelogenous leukemia and exhibited blood stains which were so typical that, in almost any field, could be seen several varieties of myelocytes, transitional forms, basket cells, nucleated red cells and megaloblasts. Arrangements were made to cooperate with the Society for Organizing Charity in planning an Anti-Tuberculosis Campaign with a public exhibit.

Adjourned.

CHARLES N. COMBS, Sec.

WHITE COUNTY.

The White County Medical Society met in regular session at Monon, April 8. The society is at present preparing a new fee bill. The paper of the session was by Dr. F. E. Lister, of Brookton, on "Anesthetics and Anesthesia," and was followed by a general discussion.

EIGHTH DISTRICT SOCIETY.

The Eighth District Medical Society held its seventh annual meeting at Winchester, Thursday, April 22, 1909.

The subject under discussion by the society, "Suggestive Therapeutics," being one of educational value as well as professional interest, Dr. Reynard had invited the faculty and students of the High School to be present and hear Professor Lindley. Professor E. H. Lindley, of the Department of Philosophy of Indiana University, gave one of the best lectures on the historic development and psychologic foundations of suggestion as a therapeutic measure, that any audience could demand. He took up and discussed the beginnings, the course and the results of many of the ancient and modern methods of faith cure. He mentioned the fact that the average patent medicine advertisement operates in two ways, it produces a mental condition that becomes receptive to the symptoms complex described, and it offers a remedy for their cure.

A careful analysis of Dowieism showed that he came in contact with and professed to cure no less than 750,000 persons, yet of this enormous number only one in a thousand were actually relieved of their suffering.

The same analysis of the reputed cures at various Catholic shrines, especially that of Lourdes in the South of France (since the latter is subject to most careful medical inspection), shows similar results. Hypnosis is a most unsatisfactory procedure to utilize as an assistant to suggestion, since it eliminates the will and makes the patient a victim of trivial suggestion. The greatest results from suggestive measures are secured among the better educated classes, where the highest faculties are best developed, hence the success of the latter day Religio-Medical movements.

Dr. Frank B. Wynn, of Indianapolis, who has had the opportunity and availed himself of the careful study of the normal and abnormal mind, followed Dr. Lindley in the symposium. He said that the average practitioner was grossly negligent of the basic principles of therapeutic suggestion as it should be used, and was guilty in many instances of ignorantly and unconsciously adding to the infirmities of his patient by making various statements as to the presence of stomach trouble, bowel trouble, chronic constipation, lung trouble, ovarian diseases, spinal trouble, heart trouble, and many others, when the condition was simply a reflex disturbance, a temporary loss of balance, or some other slight disability without serious organic change. His later remarks consisted in reviewing a number of cases that had come under his observation in which hysterical conditions had simulated actual organic disease.

Following the dinner, at 12:30 o'clock, Dr. Grant C. Markle, of Winchester, assumed the responsibilities of toastmaster, with the greatest credit to himself and honor to the society. He introduced Rev. Chas. S. Pier, of Union City, who concluded the symposium with a talk concerning the various Religio-Medical movements, especially devoting his remarks to the Emmanuel movement.

Dr. Frank G. Keller was next called upon, and succeeded in introducing an element of wit and humor into the meeting. His contribution to the symposium on auto-suggestion did not take up the consideration of the individual's becoming self-hypnotized other than sufficient to be imposed upon by an automobile salesman. His remarks dealt with auto-suggestions, their diseases and treatment, such as fracture of the rear axle, Chain-Spokes respiration, paralysis of the commutator, and the circulatory disturbances of the radiator.

Dr. W. A. Hollis, of Hartford City, devoted ten minutes to the discussion of the subject, "Educating the Public," dwelling on the good work that various lay journals and periodicals have undertaken, and the necessity of its further promulgation among the laity by the advice and counsel of the Doctor himself.

Dr. I. N. Trent, of Muncie, spoke on the subject, "Premature Delivery of Cerebral Emanations."

Dr. W. D. Schwartz, of Portland, spoke of the necessity of treating patients as individuals and not as a race susceptible of cure by various anti-remedies.

Dr. B. D. Myers, of Bloomington, secretary of the Indiana University School of Medicine, was called upon and made a statement concerning the work and requirements for entrance in the university. He stated that the university would require, after this year, two years of college work before entrance into the medical department. This college work may be taken in any institution in this or any other state where the college

work in the Freshman and Sophomore years is of the required standard.

Dr. M. A. Austin, of Anderson, followed Dr. Kemper with a few suggestions as to the advisability of seeking to impress the patient with two facts, one that you are aiming to cure him of his disabilities, and the other of the value of your services. A souvenir card had been printed suitable for reception or consultation room, which bore the following inscription:

"The fees asked by the members of every profession vary according to the ability and training of the individual. A physician can not charge the same now that he charged years ago, when living expenses, office expenses and equipment cost but a small part of what they do to-day."

While a minimum standard has been made by the competent members of the profession, there are some physicians who, because of deficient skill and training, and lacking in the equipment demanded for diagnosis or treatment, conscientiously feel that their services are not worth the standard fees and of course these men will charge less for their work. It takes both time and money to make a good doctor. It takes both time and equipment to make a diagnosis. It takes equipment and service to secure desired results. Those who appreciate the above facts most get the best service."

The meeting adjourned to convene again in the fall at Muncie.

M. A. AUSTIN, Sec.

BOOK REVIEWS

CLINICAL DIAGRAMS (25 sets). Designed for the graphic representation of clinical phenomena for preservation with the notes of cases. By James C. Wilson, M.D., Physician to the Hospital of the Jefferson Medical College. J. B. Lippincott Company, Philadelphia, 1909. Price, fifty cents (50c.) net.

This unique set affords a very convenient method of recording, in permanent form, by diagram, the extent and position of lesions of the various viscera and contains as well a key to the representation and interpretation of physical findings in the chest. Some such diagram is an invaluable adjunct to every clinical chart, and as this one is easily attached by paste or clip, it should meet with a ready demand.

PROGRESSIVE MEDICINE. March 1, 1909. Quarterly. Edited by H. A. Hare, M.D., assisted by H. R. Landis, M.D. Pp. 277. Paper, price \$6.00 per annum. Lea & Febiger, Philadelphia and New York.

The number opens with an interesting review of the surgery of the head, neck and thorax, by Frazier, in which are taken up serially the surgery of the brain, cranial nerves, face, neck (including a brief consideration of Tuoholske's operation of ligation of the thyroid veins for exophthalmic goiter), esophagus, mammary gland, trachea, lungs and heart.

Under the infectious diseases Preble discusses the rôle of milk in the diffusion of infectious diseases and presents some interesting points on epidemic cerebro-spinal meningitis, diphtheria, dysentery, influenza, malaria, measles, plague, pneumonia, scarlet and typhoid fevers.

Following a review of the pediatric literature for the year by Crandall, come similar ones in rhinology and laryngology by Kyle and otology by Duel.

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ORIGINAL ARTICLES

OBSERVATIONS ON SURGERY OF THE THYROID GLAND, WITH SPECIAL REFERENCE TO THE PSYCHIC FACTOR IN GRAVES' DISEASE *

GEORGE W. CRILE, M.D.
CLEVELAND.

For many years the development of surgery of the thyroid gland was in the hands of only a few surgeons. Of these, Kocher was the master and teacher, and to him we are indebted as much as to all others combined for the establishment of the present surgical status.

Dr. David Marine, of Cleveland, has shown that the Great Lakes basin and the Columbia River Valley form the two greatest goiter districts in the United States. Among over one thousand human and brute thyroid glands, evidences of glandular hyperplasia were found in about 90 per cent. Normal thyroid glands were so rare that Marine was obliged to obtain from the seacoast zones a number of specimens to form a normal standard.

It is my intention in this paper merely to allude to the treatment of infections, of benign and malignant tumors, and of plain goiters, and to discuss more particularly the surgical treatment of Graves' disease.

In my series of 253 operations upon the thyroid gland, 4 were performed for infections, all ending in abscess and requiring incision and drainage; two of these were in course of typhoid fever and gave pure cultures of typhoid bacilli; one followed an operation for extra-uterine pregnancy; and one was a sequel of influenza. These

were treated as abscesses elsewhere and all recovered. There were 14 cases of malignant tumors operated, 9 carcinomata and 5 sarcomata. Of these, one carcinoma and one sarcoma passed the three-year period without recurrence; the remainder died of the disease.

Among the operations for benign tumors, such as cysts and adenomata, and for plain goiters results were as satisfactory as operations for benign pelvic tumors, interval appendicitis, and uncomplicated gall-bladder cases. There was but a single death in the entire series and in the last 120 there was no fatality.

The special points of operative importance that occur to me are: that the anesthetic should be given by a special anesthetizer; that the anesthetic should be preceded by a hypodermic of atropin to control the salivary and the buccal secretions; that in cases of compression of the trachea with obstructed respiration, morphin-cocain anesthesia is the safest; that the least scar and the best exposure are secured by the low collar incision; that the divided muscles should be sutured; that the gland should be handled as little as possible; that the dissection should be made in a clear field with perfect hemostasis; that the enucleation rather than excision should be made; that a strip of glandular tissue at the upper and the lower pole and along the posterior border should be left, especially if a bilateral excision is made, ensuring the safety of the parathyroids; that the arteries should be early secured close to the gland itself so as not to cut off the blood supply of the parathyroids; that these arteries should be tied with linen or silk and not catgut, as the latter may slip; that the inferior laryngeal is best protected, not by exposing it, but by carrying the incision through tissues in which it does not lie; and that the best aid in the prevention of hemorrhage consists in

* Read before the Twelfth District Medical Society, at Fort Wayne, May 11, 1909.

placing the patient in the reverse Trendelenburg posture, thereby lowering the pressure in the veins. These are the principal points upon which the technic is founded. The wounds are always drained from 48 to 72 hours.

I have adopted the conclusions of Marine as to goiters, viewing all of them as being a part of the process of glandular hyperplasia and regression; the state of pure hyperplasia, of excessive colloid, of calcification, of hemorrhage or hemorrhagic cyst, all are a part of a general process of evolution of the gland. The close association of the thyroid gland with the development of puberty, with the menstrual period, with pregnancy, and in general with the various sexual states may be considered as a part of a normal process. These enlargements require no surgical consideration. Except in cysts, operation is rarely indicated before 25 years of age. In this group only those in which the goiter compresses the trachea or the inferior laryngeal nerves, or in which it becomes burdensome on account of its size, or for cosmetic reasons, operation is indicated. There is another indication for operation which should not be overlooked, namely, that 6 to 10 per cent. of goiters that come to operation show malignant degeneration. Therefore, a goiter that has been quiescent and then assumes an active growth ought always to be considered in the light of a possible malignancy and should be removed.

Among the difficult plain goiters may be mentioned plunging goiter. Recently I saw a patient who was suffering from marked dyspnea. There was no tumor of the neck; bronchoscopic and esophagoscopic examinations were negative. There was marked varicosity of the large veins of the neck and some dulness over the upper sternum. A diagnosis of plunging goiter was made. At operation a large goiter filling the upper part of the thorax was with difficulty removed.

There are many interesting aspects of the operative treatment of benign tumors and hypertrophies, but the great problem to-day is hyperthyroidism, or Graves' disease.

It is not until recent years that active interest in the surgery of Graves' disease has been aroused by the splendid results of Kocher, Mayo and others. Kocher's statistics show that the mortality in 254 cases operated upon was 3.5 per cent.; 85 per cent. were cured, and there was no case which did not show improvement. His statistics, however, did not include the toxic cases, which have heretofore been considered practically inoperable. Medical therapy and management

have done much in Graves' disease, but up to the present time no specific has been found. Cases improve, then relapse. The relapsing type should be surgically considered. If operated in time these become splendid subjects for surgical relief. There still remains to be conquered a group of acute toxic cases which do not respond to medication and management and are no longer safe surgical risks. If it heavily taxes the psychic state of a normal individual to face a surgical operation, what of a patient whose very disease is morbid fear?

Soon after making our first observation on the psychic factor in Graves' disease we were fortunate enough to find two dogs showing the following symptoms: extreme nervousness, muscular weakness and tremor, a daily temperature range, marked gastrointestinal disturbances, diarrhea, and emaciation. The thyroids showed a distinct thrill and were large, soft, and vascular. No exophthalmos was noted, but, as this is not always a symptom of Graves' disease in the human being, it may not be a necessary symptom in dogs. These dogs, therefore, having tachycardia, temperature curve, loss in weight and muscular strength, an increased appetite and thirst, gave a good picture of Graves' disease. They furnished an unusual opportunity for carrying out a course of experiments. Each dog was observed for several days to determine his morbid phenomena. After this was done the animal was subjected to various forms of psychic excitation, such as fear and anger. The first animal particularly was thrown into a state of marked excitement by fear. When the animal was frightened either by a whip or various other ways he exhibited after about six hours a marked rise of temperature, tachycardia, trembling and gastrointestinal symptoms. The temperature then gradually fell, the mental symptoms subsided, the tachycardia diminished, and the dog returned to his former condition. It was found that producing anger in the absence of fear also caused toxic symptoms. Following these forms of excitation the animal exhibited symptoms comparable to those occurring in human beings in Graves' disease. To make the parallel closer we planned anesthetizing the dog with maximum psychic excitation. Following this the dog showed very marked hyperthyroidism. After he had completely recovered he was anesthetized with minimum psychic excitation. The dog was given morphin half an hour before the anesthetic, the latter was very gently administered and continued for the same period and under like conditions as in the former experiment. The dog showed no symptoms whatever of hyper-

thyroidism. In our judgment, these experiments compared favorably with, and were parallel to, the different methods of carrying out anesthesia and operation upon human Graves' cases. After repeating these experiments and performing similar ones on normal dogs, so that it was obvious that we could throw these two dogs into a state of hyperthyroidism by psychic excitation, we then tried to produce similar symptoms by injecting in various doses the juice of thyroid glands which had been expressed by means of the Buchner press. This juice was given hypodermically at different times and in varying doses to the two thyroid dogs and to two normal dogs, so that, in all, ten dogs received this juice. The effect upon the two groups of animals following the injection was very marked. In the dogs with Graves' disease the symptoms appeared and lasted longer and with greater severity than in normal dogs. In them an injection caused a rise of temperature, appearing after six hours and continuing from three to five days, and in one case ten days. The symptoms in all the dogs following the injection were those of hyperthyroidism, but they were more marked in the dogs with Graves' disease than in the others. As a control the juice from a number of other organs, namely, the kidneys, liver, etc., was administered in perhaps twenty times the dosage of that of the thyroid juice, but it was found that produced no symptoms that could be confused with those of Graves' disease. These observations were carefully made, the laboratory was kept open day and night, two hour temperatures were taken, and there was little chance for serious error.

These experiments in the laboratory corroborated clinical observations previously made and we formed the following hypothesis: that in Graves' disease one of the most potent means of producing hyperthyroidism is psychic excitation. In some way, either directly or indirectly, psychic excitation discharges into the circulation an excessive amount of thyroid secretion which, in itself, may be capable of causing death.

In Graves' cases I have so planned the operation that the psychic factor is wholly eliminated. Full consent is obtained before entering the hospital. The patient is then daily given in the morning while in bed, by the anesthetist, under the guise of inhalation treatment, a complete form of anesthesia.

On the arrival of the day of real operation, a hypodermic of morphin and atropin is given half an hour prior to the anesthetic, which is given precisely as the inhalation treatment had been given. This is done while she is in bed in the

early morning and without a word of information. As soon as the second stage of anesthesia is reached she is taken to the operating room where all is in readiness. Performed in this manner, I have rarely observed any change in the pulse rate during the entire operation.

In some instances a prior "pretend" dressing was applied to the neck. In some cases the patients were discharged from the hospital without knowing that the gland had been removed. In the operation the utmost gentleness and ultraligation of vessels are practiced. We are, therefore, able to clearly see the parathyroids and their supplying vessels. There is, therefore, no danger of injuring any structures that should be preserved. There is no surgical shock, and, of course, no loss of blood. The larger lobe and the isthmus are usually removed. Should the remaining lobe be quite large a considerable amount of this lobe is removed as well. If not removed, the superior thyroid artery is ligated. The divided muscles are resutured and the wound drained for forty-eight hours. About twelve hours after the operation there is usually a sharp febrile reaction and a corresponding rise in the pulse rate. Immediately following the operation slow rectal irrigation is begun and a high water equilibrium is maintained during the postoperative period.

Postoperative results may be divided into the immediate and the remote. An analysis of sixty-four cases of Graves' operated shows at once that the results here as to immediate mortality, granting, of course, similar technic, depend almost wholly upon the prior damage done by the hyperthyroidism and the degree of intensity of the hyperthyroidism at the time of operation.

Among sixty-four cases operated, there was no fatality excepting in cases running a febrile course prior to operation. Among these febrile cases some were edematous, some delirious and had to be restrained in bed, some had widespread degeneration, and many had myocarditis. These cases were being chemically destroyed. They are antemortem cases and compare with the general peritonitis cases whose extremities are cold and clammy and whose pulse is just departing from the wrist. This class of peritonitis cases are now cured. How? By earlier operation.

Are not Graves' cases entitled to the same consideration? The gland should be removed before the body is fatally poisoned. What is the later result? In every instance either cure or great benefit followed. The clinical results are most gratifying. In scarcely any other operation is there so great relief, a relief extending to al-

most every part of the body. When does relief come? A great psychic rebound is experienced just as soon as the anesthetic effects pass off. The relief is sometimes beyond the power of words. Many parts of the body, notably the heart, may require a considerable period of time to repair the damage. The length of time is dependent upon the extent of the metabolic changes. In some instances the final symptoms trailed for two years, then finally disappeared.

Summarizing, we may state that goiter has a rather definite geographic distribution. For the United States, it is most prevalent in the Great Lakes Basin and the Columbia River Valley. For all practical purposes, we may divide them into three great classes, the first comprising benign tumors, hypertrophies, and degenerations; the second, Graves' disease—a true hyperplasia; and, third, neoplasms. Colloid goiters and benign tumors in experienced hands have about the same mortality following excision as that of interval appendectomy. Operation is indicated for cosmetic reasons, for the relief of pressure symptoms, and when beginning malignancy is suspected. Six to 10 per cent. of all goiters that come to operation are malignant. The cosmetic scar is scarcely noticeable.

Graves' disease should be recognized early and medical treatment faithfully tried. This disease runs an uneven course. If, after a careful treatment, the relapses grow more severe, excision of the gland should be done. If good judgment is used in selecting the stage for operation, the mortality should be but slight, probably 2 to 3 per cent., and a clinical course may then be completed under the care of a physician. The surgeon can successfully break a link in the pathologic chain, and the physician can do the rest.

THE USES AND ABUSES OF GASTRO-JEJUNOSTOMY.

JOSEPH RILUS EASTMAN, M.D.
INDIANAPOLIS.

A few decades ago there swept over the United States and most other so-called civilized countries a distinct "furor operandi" applying to the extirpation of the uterine adnexæ, and during the last few years there has been observed an almost morbid tendency in certain quarters to the ruthless performance of gastroenterostomy. Such misguided enthusiasm, which for one reason or another was never rampant in Indiana, is now, fortunately, in comparative abeyance. It is only a very short while since one heard upon every hand the exhortations of surgeons to prompt

operation in practically all cases of acute and chronic gastric and duodenal ulcer. At present there are many surgeons of large experience in stomach surgery who favor the limitations of surgical treatment to a relatively small proportion of cases of ulcer.

In the minds of the general profession there is nowadays apprehension as to what cases are suitable for operation, and likewise there is abroad a spirit of investigation as to the stage in which operation is to be advised, if advised at all.

As the result of serious study of these questions by both internist and surgeon it has been established that only those cases which resist appropriate medical treatment in competent hands for a reasonable time should be considered surgical cases, and it is because the internist and surgeon working together have determined the limitations of each that the surgical treatment of gastric and duodenal ulcer has become beneficent.

Naturally the immediate and ultimate results of gastrojejunostomy are better than they were in former years because the technic of the procedure has been greatly improved; however, the main reason for the improvement in results is to be sought, we think, in the more intelligent and discriminating selection of cases for operation.

Gastrojejunostomy and the Rodman operation are not looked upon at present as "cure-alls" and applied, as W. J. Mayo says, "indiscriminately without regard to local conditions."

Internist and surgeon alike realize that the ultimate results of operation for gastric ulcer, while they are in the main satisfying, do not at present support Kocher (quoted by Deaver) in his statement, made only a few years ago, that "not only can the numerous dangers of ulcerating affections of the stomach, such as hemorrhage, perforation and transition into cancer, be prevented, but the disease and its results may be so rapidly and certainly cured that the medical treatment of obscure cases must be put in the background." Koehler said further, "the pain in the stomach disappears immediately after the operation. This is the invariable rule. The patient does not require to pay any further attention to the nature of his food. The vomiting disappears, the bowels become regular and there is progressive improvement in the process of digestion." No doubt these things do transpire after operation in most cases, but certainly not in all even if the cases be selected with most exacting discrimination.

The simple presence of an acute ulcer is not to be considered an indication for operation, but the existence of such complications as perforation, hemorrhage or obstruction should at once suggest

the propriety of operative intervention. When there is pyloric obstruction, for example, no matter what the cause may be, a definite procedure is indicated, namely, the establishment of a free and permanent communication between the stomach and jejunum, and this in the light of the present knowledge will nearly always take the form of a posterior gastroenterostomy, occasionally preceded by the resection of the ulcer-bearing area, according to Rodman.

That perforation demands immediate surgical treatment no one will deny, and hemorrhage, too, if severe and exhausting, demands the prompt termination of medical treatment.

No doubt all of us have seen hemorrhage disappear under medical treatment, and, on the other hand, many have observed the victim of stomach or duodenal ulcer with practically no other symptom than those of hemorrhage, with lips and skin as white as a sheet and daily growing weaker under medical treatment by skillful and experienced men.

Among my cases was one of this kind, Mr. T., a letter carrier of Vincennes. He had not been troubled with pain nor vomiting, but hemorrhages had so weakened him that he could hardly raise his arms, yet he bore the operation—a posterior no-loop gastroenterostomy, very well. I am obliged to say that it was impossible for me to locate the ulcer during the operation, much less to demonstrate it to bystanders, which W. J. Mayo says should be possible before operation can be justified. I could find no callus, no button-like induration, but as the patient was a young man I felt sure, in view of the persistent hemorrhage, that ulceration was present. The subsequent course of the case proved this to be true, for the hemorrhage never reappeared and the man gained in weight even during the thirteen days he was in the hospital and is now quite well. Perhaps such ulcerations will heal under medical treatment. Oftentimes, however, the improvement is like the improvement between attacks of appendicitis and gallstone disease and only serves to mislead the physician. The same difference between a surgical and medical cure exists here, in some degree, as exists also in the case of appendicitis; that is, we can not be so sure of a medical cure.

Dr. W. J. Mayo considers chronic ulcers only such ulcers with thick callus as can be demonstrated to his visitors within a distance of six or eight feet from the operating table, and, believing that no large percentage of these patients with chronic ulceration will recover permanently under medical treatment, he proceeds to treat them by posterior gastroenterostomy.

The preoperative or medical stage of treatment should depend, he says, largely upon the length of time the patients are able to get along on a reduced, selected diet. Among the poor it is not easy to regulate the diet, and such patients are kept under a relatively greater risk by postponing operation.

At present there is no active conflict between medicine and surgery concerning stomach and duodenal ulcers, in each domain the conspicuous champions agreeing that many cases belong in the other field.

From Moynihan's great experience in applying gastroenterostomy in cases of stomach and duodenal ulcers, he gives us these lessons:

"1. The operative treatment of stomach disorders should be confined exclusively to those cases in which an organic lesion is present. Unless there is palpable and demonstrable ulcer in the stomach or in the duodenum or some condition which hampers the proper action of the stomach the symptoms are not due to any pathological cause capable of being relieved by surgical interference. However careful our preliminary investigations may be we shall from time to time display upon the operation table a perfectly normal stomach. We must not, then, endeavor to cover our diagnostic disaster by the performance of an unnecessary operation upon the stomach, but rather must we candidly confess that our exploration has proved negative. To perform gastroenterostomy in such cases has, I think, been proved to lead to unsatisfactory results whereby operation is discredited.

"2. In case of acute perforating ulcer the perforation should be closed or the ulcer excised. When the ulcer lies upon the lesser curvature nothing more is necessary than this. The after-history of such cases shows that they are relieved from all disabilities referable to the stomach. When the ulcer is prepyloric, pyloric or duodenal, gastroenterostomy also should be performed. It doubtless hastens the immediate recovery of the patient by affording an easier exit from the stomach than that impeded by the ulcer, and it forestalls the almost certain onset of symptoms which only a short-circuiting operation can relieve.

"3. When a non-malignant lesion is discovered the treatment appropriate to it depends upon its position in the stomach. If an ulcer be placed on the lesser curvature at some distance from the pylorus, in such a position that no obstruction is offered to the onward passage of the food, excision should be performed. In such cases the relief from gastroenterostomy may be incomplete, and it is probable that the later onset of malig-

nant disease occurs in a large proportion of cases. In some cases, however, when the ulcer is on the curvature or on the posterior surface adherent to the pancreas, relief follows if gastroenterostomy is performed on the cardiac side of the lesion. It may be that the ulcer, when anchored, impedes the proper movements of the stomach, or that the nerve supply being interfered with some local paresis of the gastric wall results.

"4. If the ulcer be prepyloric, pyloric or duodenal, gastroenterostomy should be performed. It is desirable to infold an ulcer whenever possible, for both hemorrhage and perforation have occurred from ulcers for which gastroenterostomy has been performed months or years before. The local treatment of the ulcer is always desirable and is generally easily performed."

In speaking of their earlier work in the surgery of ulcer the Mayos say that "technical errors were not the sole cause of failure to cure." The whole subject was pathologically undeveloped; they did not always know, they say, at the operating table whether ulcer was present or not, and they failed to differentiate ulcer from non-operative diseases of the stomach and occasionally operated upon patients who would have been better treated otherwise. In the beginning they really had, they confess, little exact knowledge of the living pathology of ulcer excepting its complications: obstructions, perforation and hemorrhage. The clinical symptomatology was based upon an erroneous pathology, teaching that chronic ulcer frequently confined itself to the mucous coat, consequently gastrojejunostomy was often done, when no ulcer could be found, under the mistaken idea that an ulcer actually existed but was hidden in the interior of the stomach, and a number of patients whom the operation had failed to relieve because they did not have gastric or duodenal ulcer were recorded by both physician and surgeon as instances of operative failure to cure, instead of a mistake both in diagnosis and operation, which was the fact.

In fourteen of Mayo's cases and a number in which the primary operation was done by other surgeons, they have reoperated for trouble of this description and failed to find any trace of an ulcer; they have, therefore, in such cases, cut off the gastrojejunostomy and closed both sides, restoring the gastro-intestinal canal to its normal continuity. Strange to say, following this temporary gastrojejunostomy nearly half of the patients were relieved of their original discomfort.

At present doubtful cases are eliminated and a living pathology has been established, which enables the surgeon to recognize the ulcer at the

operating table. Unless the ulcer is actually demonstrated the Mayos make no gastric operation unless necessitated by hemorrhage.

Though Finney's operation is doubtless the one of greatest efficiency in pyloric strictures, still if the stricture be due to ulcer, unless the Finney's operation be combined with excision of the ulcer, posterior gastroenterostomy will be found to be the easiest and surest method of correcting the difficulty. I have observed such a case of pyloric obstruction due to ulcer, in which the symptoms of obstruction and ulcer were clear before the operation, but in which no ulcer was demonstrable during the operation. A posterior gastroenterostomy relieved the symptoms. In this instance the patient, Mr. W., a machinist of Indianapolis, is obliged at present occasionally to use a stomach tube after indiscriminate eating. It is evident that a slight loop was left, although it was thought at the operation that the jejunum was drawn up snugly from the ligament of Trietz. I assume that there must be some loop, notwithstanding it is exactly in this class of cases —namely, pyloric obstruction cases—that gastroenterostomy even with a loop is almost never followed by vicious circle. It was for this reason that Eiseleberg proposed to obstruct artificially the pylorus when gastroenterostomy was done, hoping to produce the favorable conditions known to be present in obstructions.

Though it seems, in the judgment of the experienced, to be wise to perform gastroenterostomy in cases of ulcer of the stomach, excepting those remote from the pylorus, which are excised by almost everybody, one can easily discover a gradual tendency in favor of resection of the involved area followed by gastroenterostomy as practiced by Rodman. Everyone who has had even a little experience knows how difficult it is, especially in cases seen early, to determine whether ulcer or cancer is present.

Stomach cancer has broken down all age barriers; it has been found in persons from 16 to 75 years of age. Often the symptoms of chronic ulcer are so clear that there is no suspicion of cancer before the abdomen is opened and perhaps not then, yet cancer is present.

In many doubtful cases very little or nothing can be learned from gastric analysis, the chemical changes in cancer being sometimes the same as in ulcer (Rodman).

Early in December, 1908, the writer operated upon Mr. B., of Bicknell, Ind., for gastric ulcer. The symptoms were those of ulcer, and the analysis of the stomach contents, made by Dr. E. E. Padgett, disclosed no evidences of cancer. At operation a rather extensive prepyloric indura-

tion was found, which was quite circumscribed. There was no involvement of glands. A posterior gastroenterostomy was made. There has been no abatement of the symptoms. The patient has gradually emaciated and an induration is discoverable through the abdominal coverings and the diagnosis is not far to seek.

As early as 1839 Cruveilhier observed that gastric ulcer may degenerate into cancer.

Rodman, in support of his practice of removing all suspicious lesions by simple excision, pylorectomy or partial gastrectomy, gives the following interesting figures:

"Of 156 cases of gastric cancer examined post-mortem in the pathological institute at Kiel from 1872 to 1891, Sonnichsen found that 14 per cent. undoubtedly developed from ulcers, whereas Klausen, after studying 120 cases examined in the same institute from 1891 to 1900, found that 26 per cent. originated in ulcer. Stich states that ulcer carcinoma constitutes 30 per cent. of gastric cancers.

"W. J. Mayo found that in 54 per cent. of the cases of gastric cancer submitted to resection in 1905-6 at the Rochester clinic, both the clinical history and pathological examination of removed specimens made it certain that the cancers had their origin in ulcers.

Moynihan states that in his last twenty-two cases of gastric cancer a history of ulcer was present in sixteen, or 72.1 per cent.

"Robson, in his Bradshaw Lecture, reports no less than 59.3 per cent. of his cases of cancer of the stomach giving a previous history of chronic ulcer.

"Ssapeshko found that of 100 gastric carcinomas only ten cases did not originate on the base of a peptic ulcer."

The observations of the next few years will be full of interest. It is quite possible that they will teach that excision should be the rule and gastroenterostomy reserved for the prolongation of life in malignant obstructive cases alone.

Gastrojejunostomy has been applied by Mayo Robson, Byron Robinson, Tschudy, Remond and Mayo as a means of relief in cases of acute dilatation of the stomach of the arterio-mesenteric type following abdominal section. It is not likely, however, that this operation will be resorted to frequently in cases of acute stomach dilatation.

Charles Mayo says that he would not operate more than one in 125 cases. In other words, he would almost eliminate operation.

According to Laffer: "The operative treatment, that is, the gastroenterostomy treatment, is falsely based on the belief that most of the

cases are due to a compression of the duodenum by the root of the mesentery or on the assumption that a gastroenterostomy is a drainage operation. A compression of the mesentery was found in only 27 of 120 cases which have been autopsied, so a gastroenterostomy would but rarely be indicated to relieve a possible compression of the mesentery.

"Against the drainage idea he remarks that we have the experiment of Kelling and Cannon and Blake, which show that gastrojejunostomy is of little or no use as a drainage measure. This is borne out by clinical observations made by Mayo, Patterson and others. Tuffier had a case which occurred after a gastroenterostomy for ulcer, and at autopsy both openings of exit were found patentous and yet an acute dilation of the stomach had occurred. Kelling thinks a gastroenterostomy is useless, for the stomach is too atonic to force the stomach contents through the artificial opening, and cites Stieda's experiment on a dog, where, two months after a gastroenterostomy posterior, he produced by section of both vagi a gastric atony which caused an acute dilatation of the stomach and at autopsy was found filled with dark brownish-green fluid and both openings of exit were patentous."

It is likely that prompt differential diagnosis between acute dilatation of the stomach following operation and obstructive lesions farther down with intelligent use of the stomach tube will leave very few cases of acute dilatation for gastroenterostomy.

The stomach tube should be used immediately, no matter how nearly dead the patient may be.

Laffer reminds us that even in doubtful cases the stomach tube should be used, for in peritonitis, for example, it is often curative. The tube, he says, should be passed far into the stomach so as to reach the bottom of the dilated organ, which is often down as far as the pelvis, and thus siphon the entire amount of fluid. Neck and Borchardt have emphasized this point and advise passing the tube with the patient in the elevated pelvic position and withdrawing the tube very slowly so as to get all the fluid out. The tube should be passed very frequently.

Postural treatment should be immediately tried, as advocated by Muller, Schmitzler, Kellin and Walzberg. Patients should lie on the abdomen or assume the knee-breast position as long as possible with the weight partly supported by pillows.

Perhaps gastroenterostomy will be justifiable in an occasional desperate case of acute dilatation, but such cases will not often become desperate if the stomach tube is given its proper

recognition. Charles Mayo says that in every hospital one assistant at least should wear a stomach tube around his neck as a cravat, or perhaps the nurses might wear them as belts. The stomach tube improves greatly on acquaintance. It is certainly worth a great deal more than gastroenterostomy in acute dilatation of the stomach following abdominal operations, and until more is known of acute postoperative stomach dilatation it will be difficult to understand the value of gastroenterostomy in a condition which has, in one authentic case at least, been produced by gastroenterostomy.

WHAT TO EAT IN GASTRIC ULCER: A MILK-FREE DIET.

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With ulcer of the gastric tract diagnosed, and by this I include the duodenal ulcer, the problem of diet I consider of greater importance than of medicine. Not only do authorities disagree as to the nature of the diet, whether it be of albumins, carbohydrates, or a mixed diet, but also as to the details, which must vary according to the patient's idiosyncrasies and the clinical features of the case. The following diet is given in detail, in order to show how a patient may recover on a milk-free diet, and how necessary it is to be careful of the little things in dietetics.

Boas, Einhorn and Billings give excellent general suggestions as to diet, but lack the detail necessary. Hemmeter gives diet lists, mostly those followed by German authors, that are excellent. Vogler, in his book on "Dietetische Therapie," has a very good list of foods, suitable for Germans, but not for the average American. Foods that would be relished by a German might be the source of irritation to an American. Lenhardt seems to have as rational a diet as any I have tried. Sprigg's system of immediate feeding I consider dangerous, except in selected cases. In the following case the different methods enumerated above have been tried at various times with very poor success; consequently it was necessary to devise something that would give relief, temporary at least.

The description of the patient is as follows: March 25, 1909. Miss C. B. A., referred by Dr. John Dudley Dunham, of Columbus, Ohio, began having trouble at a Thanksgiving dinner in 1906, at Paris, France, and treated by a physician in that city, who prescribed nux vomica and rhubarb, the result being unfavorable; went to

another physician in Paris, and was sent to the hospital and put on peptonized milk. After a stay of several weeks, as the patient was not improving, left the hospital and tried a diet of her own choosing, consisting mostly of oatmeal and graham crackers.

In July, 1907, she consulted Dr. Roux, of Paris, who gave her a mixture of magnesium and soda, with olive oil at night; her diet, as far as I can learn, was of a mixed variety. She improved sufficiently to sail for home in the autumn of 1907. In 1908 she consulted a surgeon in Chicago, who, after the analysis of a test meal had been made, diagnosed gastric ulcer, and advised immediate operation. This was refused by the patient. Since that time she has had varying periods of intense pain, and periods of absence of pain, until the 1st of March, 1909. She consulted Dr. Dunham, of Columbus, Ohio; his diagnosis was gastric ulcer near the pyloric end, with beginning stenosis and a small amount of dilatation. He advised absolute rest of the patient in bed, as well as rest for the stomach itself.

Examination.—Age 53, height five feet ten inches, weight about 150 pounds, normal weight 190. Tongue coated, broad and flat, teeth normal. Eructations of gas every few minutes. History of vomiting occurring a short time after the production of gas, poor appetite, pain and burning sensation in the stomach within an hour after eating, when lying down and also on pressure. Pain getting more severe until the climax is reached six or eight hours after eating. Vomiting usually in the middle and after part of the night. Constipation present, pulse 69, weak, temperature 99.3.

Examination of the abdomen showed a slight redness over the stomach, due to a mustard plaster, no hardness was found in the pyloric region, though acute pain was present upon deep pressure. Most pain found midway between navel and lower end of the sternum: descending colon dilated, no tender spots along the spinal column, and one hemorrhoid found in the anterior quadrant upon rectal examination. Patient gives a history of one sister and three brothers having constipation, and one brother with chronic indigestion. Upon examination of the stomach contents after Ewald's test breakfast, total acidity was 134, combined HCl 62, free HCl 54. No lactic acid present, no blood present. Fecal analysis showed no blood present.

Patient was sent to the Methodist Hospital, Indianapolis, and placed in bed. High Watkins enema given. After expulsion of the same, the

following was given for nutrient enema: normal salt solution 4 ounces, predigested beef $\frac{1}{2}$ ounce, whiskey 1 ounce. This was followed the next morning by a mixture of 5 ounces of milk, predigested beef $\frac{1}{2}$ ounce, salt 1 dram, and yolks of two eggs, all being warmed to the body temperature, beaten with an egg beater, and given every four hours for five days, nothing entering by mouth except sips of Carlsbad water at first, which was changed to a solution of sodium bicarbonate, $\frac{1}{2}$ ounce to a glass of water. Before each nutrient enema, the bowels were washed out with warm water, and every other day a high enema of olive oil, $\frac{1}{2}$ pint, warm water, $1\frac{1}{2}$ pints, was given. At the end of five days the patient was given a tablespoonful of milk every three hours. Emesis followed; hence the milk was discontinued. The white of one egg was beaten in a glass of cold water and sipped slowly; this was given every three hours, and each day the dose increased by one egg, so that at the end of two weeks she was getting the whites of twenty eggs each day—that is, the whites of four eggs to a glass of water every three hours. With this diet the pain gradually disappeared, she was able to lie on her right side, which was not possible before, no gas formed, no vomiting occurred, and a marked mental improvement was noticed. The only medical treatment used was lavage with one pint of warm water, in which $\frac{1}{2}$ ounce of sodium bicarbonate had been dissolved. One-half of this amount was allowed to remain in the stomach. Before each feeding of albumin water, she was given one-half teaspoonful dry on the tongue of the following mixture:

Magnesia Uste.
Sodii Carbonatis.
Potassii Carbonatis, $\ddot{\text{a}}$ 5.0.
Sacchar. Lactis, 25.0.

Half teaspoonful dry on tongue before each meal.

On the fourteenth day one ounce of the solution of vigorol made by adding a teaspoonful to a cup of warm water, was given in addition to each feeding of albumen water. This was increased each day until a full teacup of the vigorol solution could be taken. On the twenty-first day the breast of a squab, broiled, was given, which was retained, giving no pain or nausea. This was repeated on the next day. On the twenty-third day breast of chicken, broiled, was given, vigorol and albumen water being continued at 7 and 10 a. m. and 1 and 7 p. m., solid food being given at 4 p. m.; on the twenty-fourth day, broiled lean steak chopped fine, one

ounce, morning and evening; twenty-sixth day, broiled steak in morning, broiled squab in evening; twenty-seventh day, broiled steak in a. m., two poached eggs, soft, in p. m.; twenty-eighth day, broiled steak, one and one-half ounces, and mashed potatoes, one-half ounce, in a. m., broiled squab and mashed potatoes, one-half ounce, in p. m.; twenty-ninth day, broiled steak, two ounces, in a. m., broiled breast of chicken and mashed potatoes, two ounces, in p. m.; thirtieth day, two soft poached eggs with mashed potatoes, two ounces; in a. m. rare roast beef cut fine, four ounces, oatmeal one ounce, cream one ounce; thirty-first day, broiled steak rare two ounces, mashed potatoes two ounces; a. m. broiled sweetbread one-half ounce, slice of bread two days old, cut thin, toasted, moistened with boiling water in p. m.; thirty-second day, a. m. oatmeal and cream, as before, two soft poached eggs; at noon, broiled steak rare and mashed potatoes same amount; p. m., broiled squab and one slice of toast as before; thirty-third day, one-half hour walk a. m. and p. m., patient to recline on right side one hour after each meal; breakfast same as before with one slice of moist toast added. Lunch, roast beef rare and moistened toast. Evening dinner, chicken stewed in water, and mashed potatoes.

From this time on the diet has remained the same up until the end of the sixth week, only an increase in amount each day, with the addition of rice, mutton chops and crisp bacon. Oatmeal has been cut out, as I found some of the husks after the lavage. On the forty-second day the patient was well nourished, enjoyed her food, and has had no pain for several weeks, no eructations of gas, the test meal shows normal acidity, and there is no tenderness over the abdomen. Lavage made three hours after a meal finds the stomach absolutely empty, and no symptoms of ulcer can be found. Patient sent home.

Believing that it would be best to outline a milk-free diet for use at home, the following was suggested, as the patient informed me that she had never been given a diet list to use at home. At the end of each week report was to be made in person to me for suggestions as to change in diet.

First day—Breakfast: Two soft poached eggs, toast (all toast used to be from bread three days old, cut thin, and toasted thoroughly on both sides; no bread to be used at any time, only toast or zwieback; both toast or zwieback to be taken preferably unmoistened with some liquid); oatmeal strained, cream, a cup of cocoa. Lunch: Cold roast beef, mashed potatoes, toast or zwie-

back. Dinner: Chicken stewed in water, toast in gravy, rice, plain and well cooked, cup of cocoa. No pepper to be used in any of the above: can use butter and salt.

Second day—Breakfast: Two soft boiled eggs, toast, cream, and cup of cocoa. Lunch: Broiled steak, rare, ground fine, peas strained. Dinner: Sweetbreads broiled and mashed potatoes, cocoa or weak tea.

Third day—Breakfast: Two soft poached eggs, toast, oatmeal, cream, cocoa. Lunch: Crisp broiled or fried bacon, toast or zwieback. Dinner: Roast beef rare, toast or zwieback, tapioca pudding made without milk.

Fourth day—Breakfast: Two soft boiled eggs, toast or zwieback, oatmeal, cream and cocoa. Lunch: Cold roast beef with mashed potatoes, toast or zwieback. Dinner: Broiled squab with asparagus, toast, cocoa, or weak tea.

Fifth day—Breakfast: Two soft poached eggs, oatmeal, cream, cocoa, toast. Lunch: Broiled steak and peas strained. Dinner: Roast chicken, mashed potatoes, cocoa or weak tea.

Sixth day—Breakfast: Two soft boiled eggs, toast, oatmeal, cream, cocoa. Lunch: Crisp bacon, asparagus, toast or zwieback. Dinner: Sweetbreads broiled, rice pudding, weak tea or cocoa, toast or zwieback.

Seventh day—Breakfast: Two soft poached eggs, toast, oatmeal, cream, cocoa. Lunch: Rare broiled steak, peas strained. Dinner: Rare roast beef, toast or zwieback, tapioca pudding without milk, weak tea or cocoa.

NOTE.

Quaker oats may be substituted for oatmeal. Midway between meals and at bed time, if hungry, the whites of two eggs, beaten up in a glass of cold water, or a teaspoonful of vigorol in a cup of warm water. Take prescription as given immediately before all meals except breakfast. Before breakfast take two tablespoonfuls of Pluto water, or Hunyadi water, together with a fourth of a teaspoonful of common soda, all to be dissolved in a glass of water. Water not to be very hot or very cold. If bowels do not move by evening give enema in knee chest position, olive oil one-half pint, warm water one and one-half pints. This enema is preferable every other day. If nauseated, a glass of plain water in which a teaspoonful of soda has been dissolved.

As this milk-free diet gave such excellent results in a case which had resisted other diets, I hope that it may be tried by others with the same success.

GASTRIC ULCER WITH PERFORATION AND DEATH—REPORT OF CASE.

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J. K., age 2½ years, male, American. Physicians were called Saturday afternoon, March 13, 1909, on account of patient's convulsions.

Family history negative.

Personal History.—Patient was illy nourished during the first few months of his life on account of a practically continuous gastro-enteritis. This was due to difficulty in finding a suitable food. During the first two weeks he remained in a condition of malnutrition on mother's milk. Subsequently modified cow's milk was given. The modifications were badly adjusted to the patient's powers of digestion at first. After two or three months, however, he began to improve, and then to thrive well, first on cow's milk and after the first year on more general diet from a farmer's table. At about 15 months of age he was taken with whooping-cough, which persisted for two months. After that time he had intermittent croup, with an occasional "cold," both conditions being accompanied with some stomach or bowel disturbance. During the Christmas holidays, 1908, at the age of two years and three months, he passed long, round worms on two different days.

Present Disease.—Patient mineed his food for two weeks before his death on March 14, 1909. Ten days before, he passed at stool several grains of field corn. Strawberry seeds were also found in the stools. He belched gas at different times.

On Thursday afternoon, March 11, patient, who was naturally a very aggressive, active child, felt disinclined to play as usual. He complained to his father of being cold. He remained up and around the house and yard and ate a supper of strawberries, brown bread and milk. On this day he had two seemingly natural passages from his bowels, one at 10 a. m. and another at 5 p. m. He was put to bed and to sleep about 7. He woke up crying about 8:30, when he was taken from the bed. He complained that "his bowels hurt." Parents failed in trying to produce emesis by tickling his throat with a feather. Parents noticed that he drank water copiously and frequently and that he urinated frequently. He rested quietly from 9 p. m. until 3 a. m. Friday, when he awakened parents with his eroupy cough. His mother took him into bed with her and he complained again that "his bowels hurt." He was given alum and sugar till emesis was secured, when his wheezing improved and he fell asleep. At 5 he was given an enema, at which

time he passed a large stool with shells of lima beans he had eaten the day before. He was taken up and dressed at 7 a. m. During that day (Friday) he was given 2 or 3 enemas with no result. Patient vomited six times on Friday. Each time his throat and esophagus seemed to fill with a milky white membranous mucus substance, which was immediately vomited. Parents tried to keep him in bed. They were unsuccessful and he played indifferently with his brother; was put to bed at 7 p. m. He awoke twice to vomit, but slept well between times.

At 8:30 a. m. Saturday he awoke, saw the family eating, and called for his breakfast. Food was withheld, however, as it had been the day before. About 10 a. m. he vomited same mucous substance, this time streaked with brownish color. From 11 a. m. to 2:30 p. m. he vomited repeatedly as often as three times in an hour, the vomitus being of the same character. During this time he was drowsy—he would doze off, but would presently turn over and vomit. About 11 he had a hard crying spell, at which time he alternately screamed and whimpered. This was occasioned, however, by his mother's leaving the house to go to the neighbors. At about 2:30 p. m. he "went into convulsions" and became unconscious, which condition obtained until his death the following day (Sunday) at 3:45 p. m.

There existed continuous tonic spasm of most of the muscles of the body, and, in addition, clonic contractions with opisthotonus occurred some 8 to 10 times. Any interference with the patient would produce one of these severe spasms. There was divergent strabismus of the left eye, with both eyes looking upward into the upper lids, during a convulsion. Abdomen was generally rigid, but not distended. Vomiting occurred intermittently. Breathing was stertorous and toward the last was very labored. Heart and lungs were negative. Temperature was normal during the night, but the following day it rose gradually until at 2:30 p. m. it was 105.4 degrees. Pulse varied from 120 to 170+. High clonic flushing repeated continually brought nothing but foul-smelling gas and a few brown flakes. About 7:30 a. m. stomach was washed and a large quantity of coffee-ground material corresponding to vomitus was obtained. A second lavage done immediately after the first brought clear, red-colored water. One ounce of castor-oil was introduced into stomach before tube was removed. This oil was not obtained in any of the subsequent washings of lower bowel, nor was it passed naturally.

Autopsy was done about 24 hours after death. The findings were as follows:

AUTOPSY.

Examination of meninges and brain was negative except for slight amount of clear fluid seen in the foramen magnum surrounding the first portion of the cervical cord.

Examination of heart and lungs negative. There was no free fluid in the lower peritoneal cavity. The upper portion of the peritoneal cavity below and to the left of the stomach revealed a dark, red-colored, coffee-ground fluid which corresponded in every respect to the ante-mortem vomitus. About 5 cm. below the cardiac orifice of the stomach on the antero-lateral wall was an opening about 4 cm. in diameter, round in outline with frayed out edge. All around this opening and spread over the peritoneum was this coffee-ground material. Examination of the inside of the stomach showed "coffee-grounds." Washing of mucosa showed no follicular hemorrhages nor erosions—nothing pathological except the perforation. The small and large intestines were generally collapsed. Five intussusceptions were found in the small intestines. Three of these were a mere beginning of a telescoping of all the coats of the bowel wall. The other two were each about an inch in length. The largest was located about half a meter (20 inches) above the ileo-cecal valve. Included in the intussusception was a round worm coiled on itself. One other round worm was found extended higher up between two of the other intussusceptions. There were no adhesions of the telescoped portions of the bowel and the condition was easily relieved by extension made simultaneously above and below.

Other abdominal organs were negative on examination.

I submit this report without comment. The notable difficulty in diagnosis of a gastric perforation, or even of a gastric ulcer, after the patient, a boy of 2½ years, had become unconscious, makes the review of the case more satisfactory than the actual bedside annotations. The various points brought out in a careful history taken from the parents show how long the ulcer had very probably existed. Had medical attendance been sought sooner it is barely possible that the condition could have been diagnosed, although the evidence of the literature on gastric ulcer with perforation in children shows how very rarely this accident occurs.

**SKETCHES OF THE MEDICAL HISTORY
OF INDIANA.**

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from page 209, Vol. II.)

**PIONEER PHYSICIANS OF BARTHOLOMEW
COUNTY.***

BY GEO. T. MAC COY, M.D., COLUMBUS, IND.

During the session of the Indiana Legislature at Corydon (the then capital of the state), in 1819-20, a number of counties were mapped out and a law passed providing for their organization. Among the number, Bartholomew County was named for Gen. Joseph Bartholomew, a member from Clark County. The name was given at the instance of Gen. John Tipton. At this time the city of Columbus (then called Tiptonia, for General Tipton) consisted of only five families. The county became a "separate jurisdiction" on Feb. 12, 1821, with two hundred voters, two of whom were preachers, but none were doctors.

All traditions concur in giving to Hiram Smith the post of honor of having been the first doctor to locate in Columbus, his arrival occurring in April, 1821. At least he was here as early as May 1, 1821, for on the return made by the assessor for that year (May 14, 1821) Dr. Smith is charged with a "poll tax and no other property." Dr. Smith came from Mercer County, Kentucky. What his medical education was, or where and how it was obtained, I am unable to learn; but this much I have learned by the perusal of some old records—that he was well read in his profession, better than the average of those times, and that his fine address made him a favorite at once in the primitive settlement. That Dr. Smith was a man above the average may be readily believed from the records of St. John's Lodge, No. 20, F. & A. M., of Columbus. At a meeting to organize a society it was found that Dr. Hiram Smith was the unanimous choice for master, and when the Grand Lodge met in session at Corydon, October, 1822, a charter was granted to St. John's Lodge, and Dr. Hiram Smith, although he was not present at the session, was named as the first worshipful master. This office he held for several years. Dr. Smith had the honor to open and change the first mail ever delivered in Columbus, and was probably the first postmaster.*

As to Dr. Smith's methods in practice, I can say very little. He was a firm believer in the lancet and heroic doses of calomel and Peruvian bark. Tablespoonful doses of the powdered bark, in molasses, given every two hours during a remission or intermission of fever, were one of his stand-bys in the treatment of malarial fevers. Dr. Smith continued in active practice here for many years, until the death of his wife, which occurred during confinement. To suppress a uterine hemorrhage the Doctor used large quantities of cold water. She died. His enemies claimed that the cold water killed her. This so worried and embittered him that he left Columbus and located in Mooresville, but shortly after moved to Edinburg, Johnson County, where his death occurred Oct. 1, 1869, from gastric ulcer. The date of his birth can not be determined, but it is known that he was 79 years old when he died.

The next physician to locate in Columbus was Dr. Joseph L. Washburn, who came here in the autumn of 1821 and began to practice at once. He was born and educated in Vermont. Before studying medicine he was engaged in teaching school at Middleburg, that state. The accidental introduction of smallpox broke up his school, and he was vaccinated, thus protecting himself from the disease. This so pleased him that he vaccinated many others, being so successful that he was dubbed "Kine Pox Doctor." He began the study of medicine in the office of Dr. Tan-sher, of Middleburg, Vt., and finished in the office of Dr. Needham, of Crown Point, N. Y. In March, 1822, he was senior deacon of St. John's Lodge, Columbus, Ind.

Dr. Washburn had a good English education, and a better medical education than many who have practiced here since his day; he continued to grow in popularity, not only on account of his professional ability, but his social qualities also endeared him to all. In January, 1828, he was elected county agent, and shortly afterward he was elected and commissioned magistrate of the county and *ex officio* member of the "board of control." He held this office "without fear or reproach" until the day of his death, Oct. 9, 1828. A contemporary notice appeared in the Indianapolis *Journal*, written by some one who knew him well, extolling his virtues and commanding his useful life, both as a physician and citizen. Dr. Washburn was a successful practitioner; his treatment of dysentery consisted in cathartics and opium, a practice not much improved upon at the present day. His honored remains were interred in what is known as "The Thompson Graveyard," one mile south of the city, where I saw and copied the inscrip-

* I am under obligations to my friend, Dr. George T. MacCoy, for this very interesting paper.

* Possibly this is an error.—Mr. C. P. Granfield, First Assistant Postmaster General, writes me, under date of April 14th, 1909, as follows: "You are advised that according to the records of this office the first postmaster at Columbus, Ind. was William Duerson, appointed August 22, 1821, and the name of Dr. Smith does not appear as ever having been postmaster at this office."—G. W. H. K.

tion on the moldering marble that marks his resting-place.

Dr. William V. Snyder came here from Virginia, in 1822, and practiced in Columbus and the surrounding country for several years. He was very popular with all classes, but became dissatisfied with his location and returned to Virginia, where he died many years ago.

Dr. Joseph Rose and his junior brother, Dr. E. Rose, located here about 1822. They were both good physicians, but I have been unable to learn where they came from, or where they went, as they remained here only a few years.

Dr. John Ritchie located in Columbus about 1827, and at once secured a fair share of patronage. He was sociable and affable, a fair public speaker and a safe practitioner of medicine. His wife was an educated woman, and was the first of her sex to teach the higher branches in the public schools of this city. Dr. Ritchie was born in Adams County, Pennsylvania, Jan. 5, 1782. He had a common school education, which he added to by study after his marriage. He studied medicine with Dr. Warwick, near Bryceland's Cross Roads, twenty miles west of Pittsburgh. He practiced a few years in Ohio before coming to Columbus. In 1832 Dr. Ritchie moved to Franklin, Ind., where he enjoyed a lucrative practice, and was held in high esteem for many years. His death occurred in that city, Oct. 10, 1857. He was once a candidate for the office of probate judge, but was defeated by only a few votes.

Dr. James Ritchie, son of the physician named above, was born in Erie County, Pennsylvania, June 6, 1804. He studied medicine with his father, and attended one course of lectures in the Medical College of Ohio in the winter of 1828-9. After leaving school he came to Columbus and engaged in practice with his father. Afterward he moved to Edinburg, and later to Rensselaer, where he died some years ago. Dr. James Ritchie was a member of the constitutional convention of 1850 that gave to Indiana her present constitution.

Dr. William P. Kiser came to Columbus about 1828. He studied medicine in the office of Dr. Cravens, in Shenandoah County, Virginia, having as fellow office student Dr. Joseph A. Baxter, who also located in Columbus in 1829, forming a partnership with Dr. Kiser, which lasted several years, terminating in mutual disagreement. Dr. Kiser was a good dresser and a good talker, but he was a man of quick, irritable temper, which interfered greatly with his popularity. In his practice he was noted for "snap

diagnosis"; he did not study his cases very well. He was elected treasurer of the county, which office he held several years; he also served one term in the legislature as representative from this county. He died many years ago at Rockport, Ind.

Dr. Joseph A. Baxter, as stated above, studied medicine in the office of Dr. Cravens in Shenandoah County, Virginia, and located in Columbus a year later than Dr. Kiser, with whom he was associated in practice. Dr. Baxter was a man of talents and a physician in the best sense of the term. As a diagnostician he had few equals. Almost every autopsy held in the county for eight or ten years was conducted by him. Some of these were noted criminal cases. One noted postmortem was made at night, with only the light of one tallow candle, held by the late Judge Tunis Quick. Dr. Baxter established the first drug store operated in Columbus. In religion Dr. Baxter was a strict Presbyterian, and became a ruling elder in the church in Columbus. He was one of the leading physicians of the state at the time of his death, which occurred in 1839, before he had reached the meridian of life. His death was universally regretted.

Dr. Tiffin Davis came to Columbus from Ohio in 1830. He was a classmate of Dr. James Ritchie, mentioned above, having attended lectures at the Medical College of Ohio in 1828-29. He was one of the best physicians of his day; in fact, Dr. Joseph A. Baxter and Dr. Tiffin Davis stand out as bright lights in the medical profession of this part of Indiana. Dr. Davis was the possessor of a good English education and was intended for the profession of teaching. His mother was an estimable woman, Miss Tiffin, a sister of Edward Tiffin, the first governor of Ohio. Dr. Davis acquired some fame as a surgeon, being considered the best surgeon in this part of the state. He attended the late Dr. Hiram Smith, mentioned above, in his last illness, and soon followed him to his long home. He died in Edinburg, also, about 1871.

About the same time that Dr. Tiffin Davis came to Columbus, Dr. Henry B. Roland came from Virginia, and located in the county between Columbus and Newbern. Dr. Roland was always considered one of the best general practitioners in the county, and, in fact, he was a good student all the time, reading everything he could get hold of, which, however, was not a great deal. He studied his profession whilst he was paying a debt in the true old Virginia style—in jail. At that time all bankrupts were furnished boarding and lodging, and sometimes medical attendance, whilst paying their debts

as bankrupts in prison. While he lay in jail, a kind medical friend was good enough to loan him the necessary books and give him instruction in the divine art of healing the sick, and he came out of jail a fair medical practitioner for that date. Dr. Roland was a man of fine talents, kind and obliging to all, particularly so to young men. In 1840, while practicing medicine in this county, he was made probate judge, which office he filled creditably. The last heard of Dr. Roland he was practicing medicine in Bloomfield, Iowa, where he located in 1848, and possibly died there years ago.

Among the physicians who located in this county at later periods, 1839-1850, I may mention the following:

Dr. Samuel M. Linton first located in Azalia, in 1839, coming to Columbus in 1842. He enjoyed a large practice and was an enthusiastic member of the Indiana State Medical Society.* He died in Columbus Dec. 28, 1889; his obituary is found in the *Transactions of 1890*.

Dr. Samuel Barbour settled here in 1843, coming from Rush County. After several years' practice in Columbus, he returned to Rushville, and later moved to Indianapolis, where he gave up the practice of medicine and became proprietor of the "Palmer House."

Dr. George C. Comstock, a graduate of the Louisville Medical College, established himself in Columbus in 1841. He was a young man of fine professional promise and an amateur artist of no mean pretensions. Some of his portraits in oil are still preserved. After a few years of very successful practice in Columbus, he moved to Illinois, where he died of apoplexy, Jan. 28, 1845. He had begun the practice of medicine when less than 20 years old, and, had he been spared, would have made a name for himself of which his friends might well be proud.

Dr. Robert M. McClure came from Madison, Ind., where he was born; he was a graduate of one of the medical colleges of Philadelphia. He located in Columbus in 1843, and enjoyed a fair practice while living in this city. He was a courteous, dignified gentleman, and bore the reputation of a careful and intelligent physician. He returned to Madison about 1853 and was highly respected in his new home, where he died several years ago.

Dr. Isaac Fenley, who removed here from Jackson County about the year 1844, is one of the early physicians whose name is entitled to a place among the heroes in medicine. When the second call for volunteers was made for the Mex-

ican War, in 1847, Dr. Fenley assisted in raising a company in the Fourth Indiana Regiment, and was commissioned lieutenant. Upon arriving in Mexico, he was detached from his company and assigned to duty as regimental surgeon, in which capacity he served until the close of the war.* Returning to Columbus, in 1848, he at once resumed practice. In 1849 the cholera was brought to Columbus by German immigrants from New Orleans via the Mississippi and Ohio rivers. Many immigrants died and not a few citizens, Dr. Fenley among the list. He found in cholera a greater foe than Mexican bullets, but, like a true soldier, he died fighting—at his post. He was a brave man, honorable and honest, a fine surgeon and skilful physician. His loss was felt by the entire community; he is still spoken of with reverence by some of the oldest inhabitants. "Peace hath her victories, no less renowned than war."

Dr. Homer T. Hinman, who first located in Hope, this county, came to this city in 1848. He practiced physic very successfully and satisfactorily for several years. He traveled for one year as grand masonic lecturer, visiting all the lodges in the state, after which he resumed practice until his death in 1859, from "congestion of the stomach." He was an influential citizen, universally respected, and his untimely demise in the full prime of manhood caused general sorrow and regret.

The gentlemen whose names appear in this list were all members of the "regular" school of medicine. In addition to these, there were other early doctors who located at Columbus and in the different settlements and villages of the county from time to time, but I am not in possession of sufficient knowledge concerning these to enable me to give them proper notice.

It can not be said that our early doctors were all men of eminent scientific skill or training. Few of them held diplomas from medical colleges, for seventy or eighty years ago medical colleges were not as thick in the land as now. The pioneer doctors learned all they knew by reading, observation and instruction under established practitioners and by their own after-experience. Men of fair education and good common sense in a few years gained good reputations as successful and safe physicians. They learned and were guided by actual practice more than by theory or the formulas laid down in the few books they were able to procure. Each doctor carried his own remedial agents—a small drug store—in a pair of saddle-bags of huge

* Elected president of the State Society in 1864.

* See reference to Dr. Isaac Fenley, in future chapter, "Indiana Physicians in the Mexican War."—G. W. H. K.

dimensions and closed out with liberal hand. They rode on horseback to visit their patients, day or night, far or near, through the dense woods and over slashy paths and rough corduroy roads, fording or swimming streams and enduring innumerable hardships, which the physicians of the present day would not dare to encounter.

During the years of the early settlement of the county, the numerous rivers and creeks were fouled and obstructed by fallen timber, drifts and other accumulations of vegetable débris. The waters from freshets and overflows stood reeking and stagnant on the lowlands and in the sloughs and bayous, and gave out their noxious exhalations for miles and miles around, while thick forests and tangled undergrowth, in rich and rank profusion, almost equalled the famed valley of the Amazon. The atmosphere was laden with pestilential miasma, particularly in the autumnal season, when biliary and malarial diseases were rife. Whole settlements were at times stricken down and rendered almost helpless. It is reliably stated that, in the fall of 1821, there was only one well man in the city of Columbus, a stalwart six-footer, who had evidently been brought up in a swamp. He was cook and nurse to the entire community, and his memory deserves to be perpetuated.

The doctors found the ague, in many instances, more than a match for their skill. It was of the real shaking, quaking variety, the chill lasting not infrequently three or four hours, to be followed by raging fever and intense insatiable thirst. So malignant was this type of fever that as many as three or four deaths of adults have occurred in one family in less than forty-eight hours. Peruvian bark and calomel would temporarily check the fever, but cold weather seemed to be the only thing that would stop this dreadful scourge, and even this failed in some cases, and the poor invalid either wore himself out or else wore out the disease. (The relation of the mosquito to the prevalence of malaria was not then dreamed of.) In the early settlement, the "regulars" in the treatment of fever relied mainly upon one remedy—calomel. It was, indeed, extraordinary upon the part of the physician to treat any form of disease without the generous use of large doses of calomel. Not to salivate a patient seemed to be regarded as almost allowing him or her to go to the grave without a saving effort.

A patient "sick of a fever" must also be freely bled before an internal remedy was administered. The lancet held sway alongside of calomel. If, in raising a log cabin, a man was thrown from

his "corner" and badly bruised, the practice was to bleed him copiously on the spot as the first step toward his recovery.

While we of to-day may see many things to criticise in the methods of these pioneer physicians, we must all acknowledge that they stood out as shining lights in their day and generation, the equals, if not the superiors, of their contemporaries in all the other walks of life. They did their duty as citizens, and as physicians they were always found doing their best "according to their lights." The physicians of Bartholomew County have succeeded to a noble heritage; may they prove worthy of their great responsibility.

NOTE.—In the preparation of this article, I have been greatly indebted to the Hon. George Pence, ex-auditor of this county, for valuable information and for the privilege of perusing the notes and manuscripts left by the late Dr. J. C. Beck, of Cincinnati, and some early publications by the Hon. W. H. Terrell, of Indianapolis, both natives of this county.—G. T. M.

NOTE.—Drs. Isaac Fenley and Homer T. Hinman were present at the formation of the Indiana State Medical Society, June, 1849.—G. W. H. K.

SOME OF THE MEDICAL MEN OF FAYETTE COUNTY.

For the following very interesting report of the physicians of Fayette county I am indebted to Dr. H. M. Lamberson, of Connersville.

Among the earliest physicians of whom we have any knowledge who settled within the present limits of Fayette County were Drs. John Bradburn, James Thomas, Joseph Moffett, Temple E. Gayle and Joseph S. Burr.

Dr. John Bradburn was a native of Lancaster County, Pa., and as early as 1814 settled here in the vicinity of what is known as Harrisburg, in Fayette County. Hon. Oliver H. Smith, in his "Early Indiana Trials and Sketches," refers to him as an eminent surgeon, a man of great muscular power and of the most indomitable personal courage. The doctor's experience as a practitioner in this county was marred by a fearful tragedy, in which he became instrumental in the death of two young men in the spring of 1825, he having killed them with a surgeon's knife as they, with others, were going to carry him to a creek one evening in order to "duck" him.* Shortly after the tragedy he removed to

* "About twelve o'clock at night the party silently approached the dwelling of the doctor and tried to open the door, but found it fast. The doctor was in bed in an adjoining room, wide awake, with his large knife under his pillow, cool and prepared. The outside party placed an iron crow-bar, which they had brought with them, under the door, threw it off its hinges and entered the room, carrying with them the ropes prepared to tie the doctor before they took him from the house. In the meantime the doctor remained silently sitting upon his bed, with his knife in his hands. The room was dark. The party advanced, feeling their way, until the foremost, young Alexander, about eighteen years of age, reached the bed, when he received a fatal stab with the knife, turned, rushed to the door, stepped out, and fell dead in the yard. Not a word was spoken. The next, young Caldwell, about twenty

the southern part of the state, and subsequently to the vicinity of Brookville, Ind., where he died in 1835. He is said to have been a regular graduate and highly respected and possessed of an inflexible will and great executive ability.

Dr. James Thomas was a native of New York state and was one of a colony of emigrants that settled in the vicinity of Harrisburg in 1819. He was a regular graduate and for years enjoyed a successful and lucrative practice.

Dr. Joseph Moffett settled here about 1820. He was a native of New Haven, Conn., and a well-trained student fresh from Yale College. He died in 1833.

About this time Drs. Temple E. Gayle and Joseph S. Burr came to Connersville and began the practice of medicine. Dr. Burr was a small, black-eyed man, wearing plain clothing, and speaking the plain language of "thee and thou." He came here from New Philadelphia, Ohio. Shortly after arriving here he had, for a sign, an enormous swamp lily root, almost as large as a man and cut to resemble one, nailed to the weather boarding of the hotel where he was staying, with a chalk sign above, "Joseph S. Burr, root doctor, no calomel." He later engaged in the drug business. One acquainted with him said "he was a man of some medical knowledge, which he used with moderate success, while to his patrons he utterly denounced all doctor larnin' and made his claims on the 'root' system." His chief ability consisted of cunning and a knowledge of human nature.

Dr. Temple E. Gayle was a talented man, but died young, October, 1827, at the age of thirty-two years. The "Press" said of him, "As a man of talent the doctor was excelled by few, if any, in the state; as a practicing physician he was eminently successful and popular."

Dr. Philip Mason was a native of Massachusetts, born Dec. 10, 1793, and settled in Fayette County in 1816. He finished his course of read-

years of age, advanced, evidently not knowing the fate of Alexander until he came within the grasp of the doctor, when the fatal knife was thrust through his side, penetrating his heart. He uttered a loud groan, turned, fled to the door, passed a short distance into the yard, fell and died near the body of Alexander. The groan of Caldwell alarmed the others, who immediately retreated for the door, pursued by the doctor, and one other of the party received a severe, but not a mortal wound. Capt. Broaddus told me that at one time the doctor was between him and the door, and as he passed to go out the doctor struck at him with his knife, and just grazed his side. It was very evident that but for the groan of Caldwell, not one of the assailants would have left the house alive. Such was the awful tragedy at the house. The young men killed were of the very first families of the county, indeed of the state. The excitement was intense: the doctor gave himself up, and was put into jail. After the trial the jury retired but a few minutes and returned a verdict of not guilty, on the ground of self-defense. So ended this long-to-be-remembered case in old Fayette." "Indiana Trials and Sketches," page 15.—G. W. H. K.

ing and clinical studies under Dr. Joseph Moffett of Conuersville about 1824. He practiced in the vicinity of Connersville until 1830, part of the time on his farm in Columbia township, the balance of the time at Orange, where he was in partnership with Dr. Jefferson Helm, who later moved to Rushville. In 1829 Dr. Mason was elected Probate Judge of Fayette County and served until 1834. The year following he was elected to the Legislature and twice re-elected to that body. He also served as Master of Warren Lodge, F. and A. M., for thirteen years, and as Grand Master of the Grand Lodge of the state for eight years.

Dr. Jefferson Helm, a native of Mason County, Kentucky, was born in 1803. He studied medicine with Drs. Moffett and Mason and was licensed to practice in 1827, locating at first at what is now Orange, later moving to Glenwood, where he remained until 1845, when he removed to Rushville.

Dr. Hayman W. Clark was licensed to practice medicine at the same time with Dr. Helm in 1827. Of his later history I have no record.

In 1828 Dr. Samuel Miller located in Connersville, having come from Dayton, Ohio.

Another practitioner who advertised in the Press of 1830 was Dr. Charles Barnes.

Dr. Ryland T. Brown, a native of Lewis County, Kentucky, came to Rush County in 1821, where he acted as a guide for land seekers until he attended a course at the Ohio Medical College at Cincinnati, where he graduated in 1829. In August, 1832, he located in Connersville and for several years was a partner of Dr. Mason. He remained in Connersville until 1842. In 1854 he was appointed State Geologist by Governor Wright. In 1858 he was elected to the chair of Natural Science in the N. W. C. University, at Indianapolis. He is author of a common school text-book of recognized merit, "Brown's Physiology."

Dr. D. D. Hall, a Virginian, located in Connersville, where he continued to practice, except for a few months while in the service as Surgeon of the Thirty-Sixth Regiment, Indiana Volunteers, until his death, June 20, 1871.

A published statement in 1846, giving the names of physicians practicing here, was Drs. Philip Mason, Samuel Miller, D. D. Hall, John Arnold, E. A. Bacon and S. W. Hughes, of Connersville; Greenbury Steele, Columbia township; Alfred Ruby, Alquina; George Winchel, Columbia; W. B. Tingley, Harrisburg; Amos Chapman, Waterloo; Presley Libray, Everton, and Edward Daniels, Orange.

Dr. George R. Chitwood was born in Gallia County, Ohio, May 10, 1805. He was licensed to practice medicine and surgery in 1830, located in Franklin County, Indiana, in 1831. He attended lectures at the Ohio Medical College 1835-36. He removed to Liberty, Union County, in 1837. In 1846 he received the degree of M.D. from Western Reserve Medical College at Cleveland and removed to Connersville in 1849. He was elected to the chair of General Pathology and Physical Diagnosis in the Cincinnati College of Medicine and Surgery in 1859, which he filled for the sessions 1859-60. He was then transferred to the chair of Obstetrics and Diseases of Women and Children, which he filled for six consecutive sessions, after which time he resigned on account of domestic afflictions.

On May 24, 1856, the physicians met and organized their first society, called the White Water Valley Medical Society, with the following as charter members: Drs. Samuel Miller, D. D. Hall, A. H. Chapman, W. J. Pepper, D. Trembly, W. W. Taylor, S. W. Vance, G. R. Chitwood, C. D. B. O'Ryan and V. H. Gregg, of Connersville; B. S. Silory, A. H. Thompson and M. F. Miller, Everton; H. W. Hazard, Bentonville; R. T. Gillum, Waterloo; W. B. Tingley, Harrisburg. Dr. W. J. Pepper finished his reading under G. R. Chitwood and began practicing in Connersville at this time.

On April 22, 1858, they changed the name of the White Water Valley Medical Society to the Fayette County Medical Society and continued its organization until 1861. In the meantime Dr. W. W. Taylor, who located in Connersville some years before, died in 1859.

Dr. Vincent H. Gregg entered the army as Surgeon in the 124th Regiment Indiana Volunteers, in the First Brigade, First Division, Twenty-Third Army Corps, and served in the Department of the Cumberland under General Sherman until the close of the war.

Dr. Joshua Chitwood, a son of Dr. George R. Chitwood, graduated in medicine in 1858 and entered the army as Surgeon in the Seventh Regiment, Indiana Cavalry.

Dr. George W. Garver located in Connersville in 1865, having served in the United States Navy as Assistant Surgeon on the Western Flotilla, Department of the Mississippi.

Dr. S. W. Hughes died in 1865.

In 1866 the Fayette County Medical Society was reorganized.

"The above data of the early medical history of Fayette County was mostly compiled from a similar history of medicine of the county writ-

ten twenty-five years ago by Dr. S. M. Hamilton, now practicing in this county, he in turn having obtained it from the pioneers then living in this locality."—H. M. L.

Dr. S. M. Hamilton also unearthed the history of one Caleb Smith, who enjoyed quite a reputation as a "bonesetter" and was the first practitioner in this part of the state, as far as we know. He says: "It will not be out of place in the medical and surgical history of what is now known as Fayette County to mention the name of Caleb Smith, who practiced the healing art among the first white people of the woods. He was born in England in 1775, and came to New England with his father, an English surgeon, about the year 1797. The young man married in Norwich, Conn., and came west and settled seven miles west of south of Connersville in 1807, where he practiced medicine and surgery. He died in 1821 and was buried on his farm."

GRANT COUNTY MEDICAL SOCIETY.

On the 16th day of June, 1898, Grant County Medical Society held its anniversary of the first half century of its existence. At this meeting Dr. A. A. Hamilton read a very interesting report of its medical history during the half century just closed, and to this paper I am indebted for the facts contained in this article.

The boundaries of Grant County were established by the Legislature in February, 1831, and in May of the same year the county seat was located at its present site by the commissioners and named in honor of General Francis Marion.

In 1830, one year before the organization of the county, Dr. Henry Buchman installed himself in a small cabin on the banks of the Mississinewa River just beyond the present city limits of Marion. He was the first physician to locate in Grant County. In the transactions for 1875 Dr. Lomax gives his name as Buchanan, but this is either a typographical error or a mistake of Dr. Lomax, Buchman being the correct name. After ministering to the professional wants of the sparsely settled neighborhood for a few years he removed to the west, where later he died.

Dr. Joseph Cadwallader was the second physician to locate in the county and first in the town of Marion, somewhere between the years 1831 and 1833. He spent some two or three years in the county in the practice of his profession, and he and his wife both died in this new home.

Dr. Ezra Stiles Trask, a native of Vermont, was the third physician to locate in Marion in 1833. Dr. Trask originally located in what was then known as Muncietown, at an early period

in its history, removing to Marion, as stated, in the year 1833. He practiced medicine after a sort until the year 1839, at which time he died, leaving a most amiable wife and two very promising sons, and is buried somewhere in the cemetery at Marion. An impression prevailed among the physicians at Marion that he was a graduate of Dartmouth Medical College.*

Dr. John Foster (18-1871), a native of Highland County, Ohio, located in Marion in 1834 and entered upon the active duties of his profession with fair prospects of success. Unfortunately he yielded to the allurements held out by other employments, giving himself at various times to the mercantile business, the sale of drugs, politics, the ministry, etc., but never entirely abandoning the medical profession. He served one term in the State Senate and devoted several years of his life to the work of the itinerant ministry of the M. E. Church, and at the time of his death was a local preacher in that denomination. Dr. Foster was one of the founders of the Grant County Medical Society. He died at Warsaw, Ind., in the fall of 1871, respected by all who knew him.

Dr. Samuel St. John, a native of Connecticut and a graduate in 1815 of a New York medical college, came to Marion in 1845, after having practiced several years at various places in New York, Ohio, Alabama and Mississippi. He followed the work of his profession here for the ensuing nine years and then removed to Lagro. In 1860 he returned to Marion and engaged in the sale of drugs. He continued in this business until the time of his death, Jan. 10, 1862. Dr. St. John was one of the original members of the Grant County Medical Society and its first president.

Dr. W. F. Spence was born in West Moreland County, Pennsylvania, and, after attending a medical college in Cincinnati, located in Alexandria, this state, where he practiced medicine for some years. In 1846 he removed to Jonesboro, where he sold drugs and, when able, practiced his profession.

In the year 1847 Dr. Samuel S. Horne, a native of Scotland and a graduate of the University of Edinburgh, located in Jonesboro and at once took up his professional duties. He was unselfish, a wise counselor, and an experienced, learned and efficient physician. After a long

and useful professional life he died April 19, 1874.

Dr. John A. Meek of Wayne County located in Jonesboro on the 14th day of February, 1848. The doctor served as Surgeon of the Eighty-Ninth Regiment Indiana Volunteers during the Civil War.

Sketches of several other Grant County physicians will appear elsewhere.

The Grant County Medical Society was organized on the 16th day of June, 1848, and the following physicians were present at the formation of the society: Drs. John Foster, J. S. Shively, Samuel St. John, S. D. Ayres, A. W. Henley, William Lomax and Constantine Lomax, assembling at the latter's office. At the next meeting, held July 5, 1848, a constitution was adopted and officers were elected.

A review of the records of the society will show that during the half century just closed one hundred and twenty-five names have been entered upon its roll of membership. Forty, at least, of these (1898) have already joined the silent majority. Others have lost their identity with the society by removing to other fields of labor, while a few have been expelled from the society for unprofessional conduct.

In the seventies the Grant County Medical Society purchased a hall of its own on the north side of the public square in Marion. This hall is large and commodious, is nicely carpeted, and is well furnished with desks, tables and chairs, and all that is necessary for the use and comfort of its members. An expensive microscope and other instruments necessary for the prosecution of the work of the society have been added from time to time, until now the society is the owner of much valuable property.

"Many years ago the society adopted the plan of arranging along the side walls of the auditorium large and elegantly framed portrait paintings of its deceased presidents. This mark of respect on the part of the association has already been conferred upon quite a number of the older members of the society, most of whom had been elected one or more times to fill the presiding officer's chair.

"That the society has made good use of its time when in session during the years gone by is amply attested by the hundreds of medical essays now on file in its archives, which have been read and discussed in its hearing during the five decades just ended, and the thousands of pages of closely written matter to be found in the several large volumes of its transactions, dealing, for the most part, with subjects of a

* Possibly this is an error. Mr. Ernest M. Hopkins, secretary of Dartmouth College, writes me February 8, 1907, as follows: "He was not a graduate of the college, or any of the associated schools. We have no early records about men who were students here but who did not graduate. I am, therefore, unable to say whether or not Dr. Trask ever attended the college."—G. W. H. K.

professional nature, giving additional proof of the vast amount of work of a scientific character which has been accomplished by this body since its organization."

(To be continued.)

GLEANINGS FROM OBSTETRICS IN GENERAL PRACTICE.*

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It is not supposed that there is anything new or original in this paper, unless it be that it does not concern itself with what text-books teach concerning details which are difficult or almost impracticable to carry out in the practice of a busy practitioner. The writer hopes that the recitation of an actual experience with obstetrical cases that comes with a general country practice may result in such discussions of methods and results as may be of some practical value to us.

The points mentioned will, of course, be disconnected and will touch on only the common conditions that the doctor must meet. They are the result of a personal experience with about now 600 cases of confinement.

When notified of the expected confinement, the patient is told to send to the office a specimen of urine once a month in the fourth, fifth and sixth months of pregnancy and once a week during the later months. The urine is examined each time for albumin. If none is found, no further examination of the specimen is made. If albumin be present, casts are looked for, and, if the condition demands attention at all, the patient is put on a rigid milk diet and cream of tartar freely administered.

In only a few instances has a preliminary examination been made or measurements taken, and the writer does not recall a single case in which such attention would have altered the result. If labor is not well advanced when called, an examination is made at that time; but, if labor has progressed far, an internal examination is made at once. After this, if the behavior of the patient and the time involved lead to the belief that labor is progressing satisfactorily, no further vaginal examination is made. The writer believes that it is difficult to avoid infection if too many digital examinations are made, and that many mild cases of infective endometritis result therefrom, which produce a prolonged and exhaustive puerperium rather than a natural and

rapid recuperation, as is normal, and which ultimately result in subinvolution and permanent endometritis with dysmenorrhea. All result from too many examinations. After delivery the vagina is inspected for tears, but the hand is not introduced into the vagina, except for good reason, and never into the uterus, unless gloved and under the most rigid asepsis.

The method of asepsis and antisepsis used consists in scrubbing with soap and water for five minutes. Good soap and a clean brush vigorously used are the most important elements in asepsis. After scrubbing, the hands are immersed in bichlorid or lysol solution (one dram to a pint) for two minutes. Of late I have come to use the lysol most of the time. It is very efficient and does not leave the hands nor the vagina rigid or irritated as do bichlorid solutions made strong enough to be effective. If later examinations are required, the same routine is followed. I think it very important that the hand be not contaminated after sterilization by careless contact with the labia. To avoid such, the labia should be carefully separated by the thumb and finger of the free hand as the index finger of the examining hand is introduced into the vagina. The labia and pubes are not shaved, nor are they ordinarily especially cleansed; but if labor is long and many examinations made, these parts are kept well covered with a towel wrung out of bichlorid solution.

From the standpoint of humanitarianism and also of science, I use an anesthetic during labor, ether or chloroform, usually the latter. My experience with these agents has taught me that, when used early, they will lessen contractions in about 75 per cent. of the cases, and one can not tell in which cases they will so act. Therefore, I do not use either until the latter part of the second stage of labor. At first the anesthetic is given slowly and just preceding the pain; when the head begins to emerge from the vulva, it is pushed almost to complete anesthesia. No doubt anesthesia favors postpartum hemorrhage, but the risk is not sufficient to overcome the advantages and comfort to the patient. In 40 of 55 forceps cases, the anesthetic was administered by a member of the family in the absence of an assistant. These cases occurred, for the most part, in the country where much time would be wasted in waiting for help. In such cases it is only given during the interval when the physician can watch and direct its administration, and is withheld during traction.

In this series of cases, the writer has not seen any case in which the cervix did not dilate sufficiently to allow of manual dilatation under an

* Read before the Thirteenth District Medical Society at South Bend, Ind., Nov. 18, 1908.

anesthetic before version or the application of forceps. He does remember four cases, however, in which the cervix remained stationary for several hours at the onset of labor, the patients at the time having most excruciating pains. In the last three a hypodermic injection of morphin, grain one-third, was given. This was followed in each case by rest or sleep for twelve hours, and when called again the cervix was found well dilated and labor ended quickly in each one. Chloral has been recommended. I dislike the drug under almost any conditions and believe morphin more certain and safe.

Forceps have been required 55 times and version 15 times—including consultation cases. When the head was above the brim and stationary for one hour with strong contractions in prolonged labor, version was performed; when below the brim and stationary for one hour, forceps were used. In the last three years, however, the use of the axis traction forceps has lessened the necessity for version to shoulder cases. At present, traction forceps are used almost exclusively, and from my experience I can not report too favorably on them. For the good of humanity, there should be a pair in every community. There has been only one infant death in the forceps list; in version, the mortality was about half. The one death in the forceps case was due to their faulty application. If the forceps do not lock easily I decide they are not applied right, but when they do adjust themselves easily I am morally sure of a live infant, provided traction is made patiently and only during pains. The writer believes that too much haste is one of the causes of high infant mortality in forceps delivery.

The perineum was torn in 65 per cent. of all primiparae and in 10 per cent. of all multiparae. Two cases involved the rectum. Some of the tears were of minor degree, but more than a third involved, to a greater or less extent, the deep structures of the vagina. I am aware that the percentage of tears may be criticized, but believe such criticisms will be made, for the most part, by men who do not look well for such results. Tears often go unnoticed, if the vaginal surfaces are not well examined. If the child's head is too large for the perfectly dilated canal, tears will result, no matter what one of the many means is used for the so-called support of the perineum. Only one procedure in this connection, it seems to me, is of any value in lessening tears, and that is by management of the anesthetic and by manual effort, delivery of the head

be made slow enough to allow complete dilatation of the parts and prevent precipitous delivery.

All tears were sewed up at the time of delivery. It is the custom of the writer to anesthetize the patient in case the tear extends into the vagina. An assistant separates the vaginal walls, while a running catgut suture is placed in the deep structure of the vagina. I then sew externally with silkworm gut. It is useless to sew the skin externally and neglect the vaginal portion. In one case in which catgut was used externally, the result was negative, as the suture gave way under the lochia.

The lacerations into the rectum were closed immediately by sewing the mucous membrane of the rectum by interrupted catgut sutures introduced from the rectal side, and by catching the sphincter and the rest of the perineal tear by silkworm gut. Fortunately both united, despite the fact that one case developed puerperal fever, lasting two weeks. It is deplorable to imagine a regularly licensed, responsible physician attending a case of confinement which could just as well be delivered if he were at home in bed, and neglecting to take the only active part possible for him to assume on the occasion, that of taking a few stitches in a torn perineum.

Ten severe cases of postpartum hemorrhage have been encountered. In each case the treatment consisted in the introduction of the hand into the uterus and the clearing out of clots and retained portions of placenta if these were retained. At the same time firm pressure on the fundus was made. In all but two cases the above procedure was followed by arrest of bleeding. In each of the two stubborn cases a handkerchief soaked in vinegar was introduced into the uterus and squeezed out at the fundus, resulting in the cessation of hemorrhage. Two developed sepsis and barely escaped with their lives. I used the vinegar some years ago with the above result, but if I were to encounter another such case and had sterile gauze handy I should, of course, use it for packing the uterus. No attempt was made to administer ergot at such times, as the action seems too slow in an emergency. After control of the bleeding, ergot was given hypodermically. The foot of the bed was raised. In the later cases, no other stimulants were used, as experience taught me that stimulants favor recurrence of the hemorrhage. After severe hemorrhages, the pulse remained rapid a long time and a slight fever persisted for a week. These cases give the highest percentage of puerperal sepsis.

Six cases of eclampsia were encountered, one beginning after labor, four during labor, and one before labor began. All recovered. Treatment as follows: If convulsions occur before labor, call assistant to administer the anesthetic, put patient on operating table and deliver as rapidly as possible—a thing not always easy to do. If the head is engaged, forceps are used; if difficult to engage head, I do version without much delay. In all but one, convulsions ceased with delivery. In this case a thorough trial of veratrum viride gave no results, and I have not had occasion to test it again. My routine has been to give hypodermic of morphin, grain one-third, and repeat if necessary. If convulsions occur in rapid succession, keep patient under chloroform sufficiently to prevent them or to mitigate their severity. I see that elimination is free. Hot packs, as recommended in books, are not available, as a rule, in general country practice.

Regarding the puerperium, I wish to make a few notes. As to douches, the writer has not used one in an obstetrical case in a year. It is not safe to trust such to the family, and in general practice it is only occasionally we are favored with the presence of a trained nurse. So I omit the douche altogether. Even under the most favorable conditions, I should hesitate a long time in giving douches before the fifth day following labor. Binders I use sometimes to please the patient and friends, but I do not consider them of much service. The number of visits after delivery depends, of course, on circumstances. In this connection, I wish to announce my belief in the utter absurdity of the rule laid down by Hirst when applied to a general practice. Hirst says the patient "should be visited in about twelve hours; then once a day for the first two weeks, every other day during the third week, and once or twice during the fourth week." If the labor has been short, few examinations made, no tears, and the placenta and membranes have been expelled *in toto*, one visit should suffice, and that on the fourth day; but if the labor has been tedious, requiring many examinations, the patient is seen every day for four days, the later course being determined by the progress of the case.

In conclusion, I shall say a few words on sepsis. The exact number of infected cases in this series I am unable to state; however, I have never yet had a death from that cause. This class of cases may be subdivided for practical consideration into those in which the temperature does not rise over 102°, often only to 100.5° to 101°.

The general symptoms are mild, and the whole affair may escape the notice of the physician who does not frequently see his case. The other class includes those of pronounced sepsis, whether due to retained secundines or streptococcic infection.

The mild cases, even with a temperature of 102° for several days, I let alone for supportive treatment and perhaps a little ergot. Such are certainly made worse in most cases by active local interference. Many times have I curetted such cases and seen the temperature soon after operation climb from the original mark of 102° to 104°, with pulse and general septic appearance in proportion. They do much better under the expectant plan, and this I have learned by experience to adopt. In severe cases I usually use the dull curette, followed by creolin douche, never bichlorid. If there be retained secundines, the fever falls rapidly. If streptococcic, no benefit is derived, and one is thrown back on the old plan of assisting Nature.

THE VALUE OF SPLIT PROTEIDS IN INFANT FEEDING.

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The multiplicity of patent foods and the great variety of methods in the artificial feeding of infants prove that the perfect substitute for mother's milk has yet to be found. No matter how closely the formula approaches that of human milk in its percentages, there are in the latter certain unknown properties which are missing in all artificial foods, and which give to the baby a vitality and resistance that it is impossible to get from any other line of feeding. The chemistry of mother's milk has not yet been entirely demonstrated, and we know that there are more differences than have yet been shown between their fats, sugars and proteids, and the fats, sugars and proteids of other foods.

Knowing this to be an unquestioned fact, we should never take a baby from the breast until we have exhausted every method to bring the infant and its natural milk supply into harmony. It is a most disastrous tendency of the day to abandon the breast feeding without sufficient reason. Mothers at the slightest provocation are willing to quit nursing their babies, and in this they are encouraged by the apathy of the general profession and the pernicious activity of the patent-food manufacturers who watch the birth reports and flood the mothers with literature which deludes them into the belief that the manufactured food is equally as good, if not bet-

ter, than mother's milk. And it is no wonder that these mothers, worried and harrassed by the double duties of household cares and nursing babies, grasp at the idea of lessening their own labors and conferring a benefit upon their babies, especially when this delusion is fostered by physicians who persist in prescribing patent foods, and by their patronage endorse the extravagant claims of the purely commercial men behind them.

There is no valid reason why patent food should ever be prescribed for an infant. They are, without exception, low in fat and high in starches and proteids, making foods which have not sufficient caloric value, within the range of digestibility, to properly sustain a normal baby. Those cases where infants apparently do well on some of these foods are instances of abnormal requirements, and would do better on cow's milk, prepared so as to approximate the same formula. When a physician depends upon a patent food, and it is a melancholy fact that only too many do, he can only hope for success by trying to find a baby so flexible that it will fit the food, when he should be trying to find a food so flexible that it will fit the baby. This should not be difficult to do when there are so many valuable methods in use to-day, and, while none is universally successful, each has its particular value in selected cases, and all are useful in increasing our armamentarium in the battle of infant feeding.

Authorities agree that the artificial food of choice should be cow's milk properly modified, but many differ in the method of modification. Some ignore the personal equation and idiosyncrasies of babies, and seek by chemical means to so dispose of the curd that they can produce a milk of universal adaptability. To this class belong those who use cereal diluents to produce a softer and more flocculent curd, and those who depend upon alkalies, especially sodium citrate, to change the calcium casein of the curd into the more easily digestible form of sodium casein. Both of these methods are valuable at times, but the cereal diluents must not be used before six months, as starch digestion does not develop until then. The advocates of buttermilk base their claims upon the fact that the tough, leathery paracasein is changed into the casein lactate which is easily taken care of by the baby. Buttermilk, unpasteurized, is especially valuable in cases accompanied by fermental diarrhea, as the living lactic acid bacilli inhabit the growth of the bacilli which cause the fermentation. But purely as a food proposition I doubt if buttermilk will attain any great

favor, as it often disagrees with the baby's stomach and almost always disagrees with the mother.

In Germany some observers claim that the weight of the baby will serve as a guide to the caloric requirements, and base their feedings accordingly, but this method is fallacious, as we all know that babies of the same weight and age present vast differences in their caloric demands and powers of digestion and assimilation. What is overfeeding in one may be starvation in another of the same weight. One baby requires a high percentage of fat, another will not gain until all fat is eliminated. One demands a large amount of proteids; its mate does better on a food of low proteids; with sugar it is the same, except that the instances of sugar intolerance are less often found.

This brings up the practical question as to how we can determine the needs of a given baby: whether it is one that will require a high or a low fat, a high or a low proteid. I know of no absolute rule or method for determining this, but in general it may be said that each baby requires a food which has the highest caloric value that is compatible with its powers of digestion. This can be determined by starting the infant on a low percentage, then cautiously raising the percentage until we have established the limits of digestion. Too high fat is usually characterized by a rapid gain in weight, delayed vomiting, diarrhea or constipation with white, putty-like stools, while proteid indigestion causes vomiting immediately after nursing, colic, constipation and curds in the stools. It will be found that the more careful and skilful the physician the higher will be this limit of tolerance, and it is rare to find a normal baby that can not take cow's milk properly prepared in sufficient strength to answer its caloric needs. We may find cases which will tax all our ingenuity, but by carefully manipulating the food in the manner to be described failures should be few.

For the cases which are unable to take fat the remedy is easy. Milk of low fat percentage, skim milk or buttermilk are all at our command. Sugar rarely causes trouble, but when it does the remedy is obvious.

It is the proteids, or rather the caseinogen, in cow's milk which is the great stumbling block; the laeto-albumin seldom causes trouble, but normally the proportion of laeto-albumin is only one-fifth and the caseinogen is four-fifths. In mother's milk the laeto-albumin is two-thirds and the caseinogen is one-third, and the formula is, approximately, fat 4.00, sugar 7 per cent., laeto-albumin 1.00, and caseinogen .50. Cow's

milk, diluted to approach the same formula, would be fat 4.00, sugar 7, lacto-albumin .30, caseinogen 1.20, but we can by the use of whey produce a formula from cow's milk which would be: fat 4.00, sugar 7, whey proteid .90, caseinogen .50, and we can even further reduce the caseinogen if necessary.

The method to be described is that which has recently been adopted by the departments of pediatrics of Harvard University and Johns Hopkins University and has been used almost exclusively in the Children's Hospital at Boston for three years. It is remarkable since the adoption of this method how few cases of infantile atrophy have been recorded there; I looked over the records this summer and found only one death from atrophy in three years. Previous to this time there were many every year.

This method is not put forth as a panacea, nor can it be universally applied, yet I do know that it has broadened the field of correct feeding considerably and has added much to the scope of our work by allowing us to obtain a greater variety in our percentages. It can be used with any method for modifying milk, whether it be that advocated by Holt, Rotch or others. For instance, if we have an infant who can digest fat 4.00 and sugar 6.00, but whose limits of proteid tolerance are .60, we can add whey to the mixture in place of the water and increase the lacto-albumin or whey-albumin, which is the same, .75, making a total proteids of 1.35, which would add materially to the caloric value. This can be easily done by a method originated by Dr. Ladd, of Harvard, who states that "each two ounces of whey replacing an equal quantity of water in a twenty-ounce mixture will raise the whey proteid percentage .10 per cent. and will increase the sugar percentage .50 per cent."

Examples: To produce the above formula of fat 4, sugar 6, proteid .60, alkalinity 5 per cent., we would have to take four ounces of 20 per cent. cream, lime water one ounce, fifteen ounces of boiled water and $2\frac{1}{2}$ tablespoonfuls of milk sugar. Replacing all the boiled water (or fifteen ounces) with whey, we would increase the whey proteid .75, because each two ounces of whey replacing an equal amount of the water would increase the whey proteid .10, and fifteen ounces would be $7\frac{1}{2} \times .10$, or .75.

This method should always be remembered, since where trouble arises from the curd it will be found useful in a larger number of cases than any other method, because it comes nearer to approximating the goal of all our endeavors,

viz.: the substitution of a food which is similar to mother's milk by simply replacing part of the caseinogen of cow's milk with a whey protein.

SPECIAL ARTICLES

FEE DIVISION.*

It has become a practice in many communities—a practice which thrives in the dark—for certain surgeons to induce general practitioners to refer them patients for operation, the fee for the surgical care to be returned in part to the general practitioner: also for general practitioners to exact of surgeons for patients tendered to their skill a division of the operative fee in exchange for the favor shown.

This, gentlemen, is a traffic in human life—patients with ailments which only surgery can relieve are bought and sold. As the practice lacks any moral element, the sufferers who are the subjects of barter naturally become the patients of those who pay the highest commissions. As a rule, these surgeons are the least skilled—thinking, as they do, of the financial value to themselves of an operation they neglect the niceties of surgical technic which so much concerns the future health and happiness of the patient, and even means the difference between life and death.

If all members of the medical profession should sink to this base level of commercialism, and cease to labor in the fields of altruism, heaven help the people! This is not said in antagonism to the use of business methods by physicians—rather would I insist on better business management in our dealings with patients, but let it be done in strict accord with the highest principles of sterling honor.

The physicians engaged in the fee-splitting practice have prostituted their noble calling. They look upon medicine and surgery as a purely business proposition. Consciences become seared by money grabbing, and the best interests of the patients are scarce thought of. Gentlemen, the practice is reprehensible, and has no moral justification. A laborer is worthy of his hire—the surgeon who tries to get a compensation somewhere near what his services are worth—and they are never too high, when a life is saved with resultant years of happiness to the individual and to his family—should not be compelled to give to the physician who did nothing but refer him the patient a large slice of the fee.

* Reprinted from the California State Journal of Medicine.

The physician receives something for nothing—the patient actually pays into the physician's pocket through the surgeon a compensation which is rightly the surgeon's. The physician actually collects from two parties for services rendered to neither—it is a species of graft.

The medical profession stands for the increasing of individual and racial happiness, stands for the prevention and abolishment of disease. It offers to humans weighted with illness, relief and cure consistent with modern knowledge and its application. To each member of the profession it is not given to labor with equal knowledge and skill for the alleviation of suffering. Opportunities, training and adaptabilities have not been the same.

The public has learned that the medical profession must be adequately compensated for work done in order that it may have the means to ever increase by study and research the value of their services. This is not a selfish hold-up on the part of physicians, most of whom, did they devote the same thought and energy to other pursuits that they do to medicine, would perhaps be members of the wealthy classes.

Sick people prefer to be restored to health by those who are the most competent to do so, and they are usually willing to pay a compensation commensurate with their means. It holds good in the medical profession as in all other spheres in life that some men will be better qualified to handle certain medical and surgical problems than will others. That they will be better paid for handling these conditions is part of modern social arrangements—the public expects to and desires to pay for actual value received.

A person naturally seeks a physician when he is ill. So great is his faith in the general probity of medical men that the average individual goes to the doctor nearest him, unless other circumstances send him to another practitioner, and relies upon him to direct the proper treatment. He places his life and well-being in trust. Nobly has the medical world merited this trust, keenly has it been alive to the sacred responsibilities of the calling. So utterly impossible has it been for any physician to be conversant with or able to handle all the special problems of medicine and surgery, that part of the duty of each has been to refer to better qualified men the patients whose illnesses are beyond his handling properly. It is a signal and unselfish service to humanity of which the profession is proud.

Only in this wildly commercial age, wherein money has seemed to be a god, have certain members of our glorious calling seen the possibilities of financial gain to themselves through trading upon the illnesses which patients in a supreme

faith bring to them for cure. Such papers as this are written merely that we may not all forget the obligations of our work, our responsibilities to humanity. It is well that our medical societies should discuss the relations among their members and our relations to society. Only in this way shall we keep before us the "Gods of our Fathers."

Undoubtedly, fee-splitting may have some of its origin in the dissatisfaction of family physicians over what seems to be gross discrepancy between the fees they receive for months of service, and the fee a surgeon receives from the same family for a single operation. Though this discrepancy be present, it does not give the general practitioner a moral claim on part of the operative fee.

Each charges for his services according to standards of his own. The questions involved are—does the surgeon ask for more than he deserves?—does the general practitioner rate his services too low? In answer it may be said that the general practitioner in his heart of hearts knows that rarely is the surgeon unjust or excessive in his fees when the service is considered—rather the practitioner undervalues his own work, and knows that he has failed to educate the public to appreciation of his services which are of equal and often of greater value to society than are the surgeon's.

Understanding this, does not the family physician demean his calling and demean himself in demanding and accepting commissions from the fee for surgical services rendered by another and justly belonging to him, when this same money—the commission—should have been his directly from the patient for the services which he has not taught the public should be rightfully paid for and for which he has not the courage to charge? Such services are, for instance, first, the making of the diagnosis, and the responsibility entailed in deciding the necessity for operation, and in selecting the right man to whom to intrust the patient's life; this service should be of great value, for the patient relies utterly on his family physician, as he himself is not competent to judge of surgical conditions and of operators—the physician must, therefore, be conversant with the work of surgeons, and this requires time, travel, study and money on his part that he may know; second, for paving the surgeon's way with accurate data of the case and the patient's idiosyncrasies, and, third, for consultation after operation, etc.

Gentlemen, why should the surgeon collect for the general practitioner for these and other similar services? He is not a bill collector.

Let me state my convictions: If the public should ever come to believe that it is being deliberately sold by its family doctor in whom it reposes all confidence, to the surgeon who pays the highest commission and not to the one of greatest surgical skill and judgment, there surely will be an eruption, which will go ill with the general practitioner. He is seeking a betterment of his financial status, which is justly deserved, in an utterly inexcusable way, which will altogether defeat the desired ends.

A spirited and concerted opposition to lodge and club practice, to excessive output of poorly prepared doctors from inferior schools, and united action toward the enactment and enforcement of good medical laws which would shut out of practice much of quackery and charlatanism, can aid much in bringing the general practitioner into his own, and, too, will mean increased lease of life and happiness to humanity. The family doctor has yet to learn, has yet to teach his clientele that his services should not be reckoned at so much a visit, but should be based on the broader ground of value received in staying disease processes, through a keen knowledge of the underlying pathology.

Thousands of physicians charge nothing on their books for diagnosis and for opinions relative thereto. Does the sick patient always derive more benefit from, say, twenty visits at two or three dollars apiece, in which perhaps the pulse is felt and a little conversation thrown in, or from one or two visits in which complete urine, blood, stomach and other analyses are done, than a rational therapy may be instituted?

This latter type of service is the essential one to the patient, and for which he should pay—visits should be incidental. If the practitioner insists on fees commensurate with the importance of the case and the knowledge required to reach a correct diagnosis, there will be no reason for him to bleed the surgeon, who should justly have his deserts for the work he does, and which the practitioner does not do, and is not qualified to do through lack of training.

Specialism exists in medicine as in all other pursuits, and it is not to the discredit of the general practitioner that he is not proficient in surgery. However, it is much to his discredit if he exacts tribute from fees which he does not earn. The mere fact that he is in a position to refer patients entitles him to no division. In the heart of the true physician there should be a quiet joy in being able to direct a patient to the hands of him who can give the relief he himself can not. The mission of the medical profession is unselfish service.

Now, fellow practitioners, let me ask you a question. What course do you follow, when you need surgical attention? Do you not seek the surgeon whom you know to be utterly devoted to his work, scrupulously careful of every canon of surgical principle, and so interested in the welfare of patients that no thought of financial gain can bias his judgment? Of course you do, and you travel miles to him, consistent with your means.

Why don't you refer your surgical patients then to this man, or to those like him, consistent with their means? Most of you do—this is for the few who do not. You know that the consultant or the surgeon who offers commission, or from whom you exact commission, is competing with his more honorable colleagues on a basis other than that of professional character and skill. The reputable surgeons seek practice merely on their merits.

The fee-splitting surgeon takes an unfair advantage, and perhaps gains a practice more rapidly, but you know you have not the confidence in his judgment as to what is best for a patient, for you feel his judgment becomes warped as the prospect of a lucrative fee presents. But as you are looking, too, for your fee your conscience sleeps with the surgeon's. You deteriorate morally, and before you realize it you have deserted your surgical friend who has given you 50 per cent. for another who will pay you 75 per cent. What betrayal of a patient's confiding faith!—the patient who thinks his family physician is all honor! What would his action be when death perhaps confronts him, did he know his physician was using him for bait to catch the highest bidder?

Many surgeons can not bring themselves to the point of paying commissions outright, so they stretch the point to ease their consciences. The following substitutes have their champions: Some permit the general practitioner to transact all financial arrangements with the patient, the practitioner turning over to the surgeon an amount previously agreed upon between them—many give frequent and liberal presents to their friends, while still others request the general practitioner to be assistant at the operation of the referred patient, and perhaps direct the after treatment, for which he is paid a very liberal fee.

With reference to this last practice I would say a word ere closing. The placing of a knife into a human body is a serious matter. The responsibilities of a surgeon exist from the moment the anesthetic is begun until he dismisses the patient wholly safe from any injury which could arise through his own manipulations or

those of assistants. Life may be jeopardized not alone by the disease for which an operation is undertaken, but by lack of anatomical knowledge, by faulty technic, by imperfect asepsis, and by ill-judged treatment of conditions which arise after an operation, incident thereto, or to be considered with reference to the surgical problem present. The surgeon takes all the risk of both immediate and final failures, and with it loss of reputation. For the acts of his assistants he is wholly responsible. Should the general practitioner then feel slighted because the surgeon who, alive to all accidents which can occur in the surgical field, takes means to prevent them, in the interests of the patient, by having his own associates, trained to assist him as he desires, both during the operative technic and in the after-care?

Insistence by the physician, not practically conversant with surgical principles and technic, upon being an assistant at operations, and upon giving orders during after-treatment, without the concurrence of the operator, is distinctly troublesome, and often jeopardizes the patient's life and the surgeon's reputation. This may be a new thought to many, for the problem is comparatively a new one before the profession introduced by the widening surgical field. There is no doubt that the family physician will meet it aright, as the situation clarifies itself before him.

Fee-splitting of which the patient has no knowledge is a demoralizing and degrading practice, and evil are the consequences to the afflicted. The physicians and surgeons entangled in the meshes stand convicted of falling far from the teachings which rule the great body of medical men—the teachings of loyal and unselfish service.

REXWALD BROWN, M.D.
SANTA BARBARA, CAL.

ACETANILIDUM.*

W. H. FOREMAN, A.B., M.D.
AND
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I. Physiological Action.—The physiological action of acetanilid depends upon the dosage, duration of administration and on the susceptibility of the patient, which susceptibility is a result of his physical and psychical temperament, age and disease.

* This is the first of a series of articles on practical Materia Medica and Therapeutics that will appear in THE JOURNAL.

II. Medicinal Effects.—Acetanilid administered in moderate doses, for a short time and in properly selected cases, acts in varying degrees as follows: Upon the nervous system as a sedative and analgesic; upon the circulatory system as a cardiac and circulatory depressant; upon the blood it modifies the corpuscular elements, freeing and changing the hemoglobin and thus reducing its oxygen-carrying power; it depresses the respiratory center directly and also indirectly by the deficient oxygenation of tissues which it induces; it decreases heat production and increases heat dissemination, thus reducing fevered temperature.

III. Toxic Action.—In large doses, prolonged administration or in susceptible individuals, acetanilid produces toxic symptoms in varying degrees as follows: cyanosis; anxious, livid face; slow, feeble and irregular pulse; slow, shallow and labored respiration (dyspnea); vomiting; cold, moist skin; collapse.

IV. The Treatment of Toxic Symptoms Consists in:

(1) Emptying the stomach by means of a stomach tube or by means of an emetic, such as tepid water, salt water, mustard water.

(2) Patient in recumbent position with hot external applications, as hot-water bags, hot bricks or hot irons.

(3) Administration of stimulants, as aromatic spirits of ammonia, strong black coffee, strychnin, atropin, brandy, whiskey, caffein, or camphor.

(4) Oxygen inhalations.

V. Drugs Having a Similar Action to Acetanilid:

(1) Antipyrin is more analgesic, probably to a slight degree less toxic and very soluble.

(2) Phenacetin is less analgesic, less toxic and practically insoluble.

VI. Drugs Acting as Synergists to Acetanilid.—Quinin, salicylates, bromids, sodium bicarbonate, citric acid, camphor, hyoscyamus, gelsemium, cannabis indica, opiates (morphin, codein).

VII. Drugs Acting as Corrigents to Acetanilid.—Nux vomica (strychnin), belladonna (atropin), caffein, camphor, ammonium carbonate, alcoholics (whiskey, brandy), aromatic spirits of ammonia.

VIII. Therapeutics of Acetanilid.—

(1) As an analgesic and nerve sedative in neuralgias, headaches, migraine, sciatica, rheumatism, neuritis, influenza, dysmenorrhea, epilepsy, chorea, pertussis, vaginitis or urethritis

(locally), and in general nervous excitability (in small doses and combined with bromids).

(2) As an antipyretic in dynamic or sthenic fevers, as in rheumatism and influenza.

(3) As an antiseptic in wounds, ulcers, chancroids and chancreas.

(4) As a hemostatic in epistaxis and oozing from wounds.

IX. Administration.—On account of its slight solubility in water, acetanilid is administered in capsule, powder, tablet or pill. It may be prescribed in solution in dilute alcohol, whiskey and brandy. (Antipyrin is very soluble in water and is sometimes used where solutions are desired.)

It is often prescribed with some drug to assist its action, as codein, the bromids, sodium bicarbonate and camphor.

It is always safer to administer some drug to counteract its undesirable effects, as caffeine, camphor, ammonium carbonate, atropin.

The U. S. P. recognizes one preparation of acetanilid, viz., *Pulvis Acetanilidi Compositus*, composed of acetanilid, sodium bicarbonate and caffeine, the dose of which is $7\frac{1}{2}$ gr. This dose is, however, unsafe, as it contains a little more than five grains of acetanilid.

Various combinations of acetanilid with other drugs (adjuvants and corrigents) may be made to meet the exigencies of practice, some of which are as follows:

R. Acetanilidi	gr. xii	0.800
Caffeinae citratæ	gr. iii	0.200
Camphoræ monobromatæ	gr. vi	0.400

Misce et fiat in capsulas No. vi.

Note.—The caffeine and camphor are used as corrigents to the acetanilid.

R. Acetanilidi	gr. xv	1.000
Sodii bicarbonatis	gr. x	0.650
Ammonii carbonatis	gr. xv	1.000

Misce et fiat in capsulas (not pulveres) No. x.

Note.—The sodium bicarbonate aids in the assimilation of the acetanilid, while the ammonium carbonate acts as a corrigent.

R. Acetanilidi	gr. xx	1.300
Sodii bicarbonatis	gr. xv	1.000
Caffeinae	gr. vi	0.400
Acidi citrici	gr. x	0.650

Misce et fiat in capsulas (not pulveres) No. x.

Note.—The caffeine and citric acid in the above should be mixed and slightly moistened; this allows the formation of a fresh preparation of citrated caffeine; it should then be dried and mixed with the other ingredients.

R. Acetanilidi	gr. xx	1.300
Sodii bicarbonatis	gr. xx	1.300
Sodii salicylatis	3 lss	6.000

Misce et fiat in chartulas No. x.

Note.—The sodium salicylate is used as a synergist to the acetanilid.

R. Acetanilidi	gr. xx	1.300
Potassi bromidi	gr. xxx	2.000
Sacchari lactis	gr. xv	1.000

Misce et fiat in chartulas No. vi.

Note.—The potassium bromid is used as a synergist to the acetanilid.

R. Acetanilidi	gr. xxv	1.6000
Potassii bromidi	gr. xv	1.000
Caffeinae citratæ	gr. v	0.325

Misce et fiat in capsulas No. x.

R. Acetanilidi	gr. xxv	1.600
Sodii bicarbonatis	gr. x	0.650
Caffeinae citratæ	gr. vi	0.400
Caffeinae monobromatæ	gr. vi	0.400

Misce et fiat in tabellas or capsulas No. x.

R. Acetanilidi	gr. x	0.650
Sodii bromidi	gr. 1	3.250
Extracti hyoscyami	gr. v	0.325
Caffeinae citratæ	gr. v	0.325
Moripinæ sulphatis	gr. 1/5	0.013

Misce et fiat in tabellas or capsulas No. x.

Note.—The sodium bromid, extract of hyoscyamus and morphin sulphate all act as synergists to the acetanilid, while the caffeine corrects their action.

R. Acetanilidi	gr. xx	1.300
Quininae sulphatis	gr. xx	1.300
Extracti hyoscyami	gr. v	0.325
Extracti cannabis indicæ	gr. iiiss	0.163
Arseni trioxidi	gr. 1/10	0.0065
Strychnine sulphatis	gr. 1/5	0.013

Misce et fiat in tabellas or capsulas No. x.

Note.—The strychnine sulphate is used instead of the caffeine as a corrigent.

R. Acetanilidi	3 i	4.000
Zinci oxidii	3 i	4.000
Amyli, q. s.....	3 i	32.000

Misce et fiat pulvis.

Sig.—Use as a dusting powder.

R. Acetanilidi	3 i	4.000
Adeps lanæ	3 ii	8.000
Petrolati, q. s.....	3 i	32.000

Misce et fiat unguentum.

R. Antipyrinae	3 i	4.000
Caffeinae citratæ	gr. xx	1.300
Aqua destillatae	fl. 3 iv	120.000

Misce et fiat solutio.

Sig.—Teaspoonful as required.

Note.—In the above prescription antipyrin is used as it is very volatile, while acetanilid is almost insoluble.

Note.—Corrigent—any agent which modifies the action of a drug which is too harsh. Synergist or adjuvant—any medicine which aids or cooperates with another.

X. Pharmaceutical Preparations Containing Acetanilid.

Reliable pharmaceutical houses prepare many preparations containing acetanilid, the exact formulae of which are given and which are not protected by "trade names." These preparations are simply mixtures, requiring no special skill either in formulating or compounding, but which are therapeutically valuable and are worthy the patronage of physicians.

There is, however, another class of preparations containing acetanilid which are unethically exploited and the formulae of which are not defi-

nitely given; these are simply mixtures, requiring no special skill either in formulating or compounding and which are protected by "trade names." These preparations may be therapeutically valuable if properly used, but the physician has no exact knowledge of them; they are simply mixtures which the physician can formulate and the pharmacist compound; they have fictitious prices; have fancy, catchy, meaningless names, and through the methods of advertising by the manufacturers they soon become common property, and may thus be the means of doing much harm. Such preparations are unworthy the patronage of physicians. To illustrate we may mention the following:

Ammonol and phenalgin, composed of acetanilid or phenacetin, sodium bicarbonate and ammonium carbonate.

Antikamnia, composed of acetanilid, sodium bicarbonate and sodium salicylate.

Pheno-bromate, composed of acetanilid and potassium bromid.

Bromo Seltzer, composed of acetanilid, potassium bromid and caffeine.

XI. Precautions to Be Observed in the Use of Acetanilid:

1. Susceptibility of patient (temperament, age, disease).
2. The use of preparations in which the definite strength of acetanilid is known.
3. The use of proper adjuvants and corrigents.
4. Toxic symptoms.

THE Wayne County Medical Association has issued a second protest against the use of names of its members in lay journals in connection with medical and surgical cases.

THE graduating exercises of the Indiana University School of Medicine will be held this year at the University building at Bloomington. Governor Thomas R. Marshall and Dr. David Starr Jordan, president of the Leland Stanford University, will deliver addresses.

OWING to the crowded condition of the Methodist Episcopal Hospital, at Indianapolis, extensive improvements are contemplated. It is planned that next fall an annex will be erected to cost not less than \$60,000. While there is ample space at the present time, yet the demand for private rooms has been so great that an annex is needed.

The work of erecting cottages for the formation of a tuberculosis colony on the grounds of the Indianapolis City Hospital began March 25, and the first patients have already been received for treatment. Four of the cottages are to be built by the Indiana Society of the American Red Cross and two by church societies. There are to be three two-room and three one-room cottages, and only patients in the incipient stage of tuberculosis will be received.

THE Surgeon General U. S. A. has directed that the 18 medical officers of the Indiana National Guard shall go into camp at Sparta, Wis., July 15 to 28 to attend the hospital school which will be held there. A fully equipped field hospital will be instituted there and all the conditions of actual service will be present. This is the first gathering of medical officers of this kind. It has been proposed that the officers of Indiana extend their trip to Rochester, Minn., to visit the clinics conducted there by the Mayo brothers, and Dr. Will Mayo has issued a courteous invitation to them. All the militia officers of the central states will be present at this meeting in Sparta, and all the militia officers of the eastern states will attend a similar meeting at Antietam, Md., while those of the western states will assemble at San Francisco.

SINCE May 1 the Council on Pharmacy and Chemistry of the American Medical Association has acted on the following products:

Articles accepted for N. N. R.: Alypin Tablets, 3½ grains, 1⅓ grains, ¼ grain, ¾ grain (Farbenfabriken of Elberfeld Co.); Helmitol Tablets, 5 grains (Farbenfabriken of Elberfeld Co.); Sabromin Tablets, 8 grains (Farbenfabriken of Elberfeld Co.); Veronal-Sodium Tablets, 5 grains (Farbenfabriken of Elberfeld Co.); Novocaine Nitrate (Koechl & Co.); Holadin and Thyresol (Farbenfabriken of Elberfeld Co.); Bile Salts (Fairchild Bros. & Foster); Oxone (Roessler & Hasslacher Chemical Works); Apinol (Apinol Chemical Co.). Articles accepted for N. N. R. appendix: Tablets Atoxyl, ½ grain (Sharp & Dohme); Tablets Novocaine Soluble, 1.14 grains (Sharp & Dohme); Ampules Atoxyl Solution, 10 per cent. (Sharp & Dohme); Ampules Atoxyl Solution 10 per cent. and Novocaine 1 per cent. (Sharp & Dohme); Tablets Novocaine, ¼ grain (Sharp & Dohme).

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EDITORIALS

INCREASED REQUIREMENTS FOR MEDICAL MATRICULANTS.

No honest medical student or practitioner can but look with favor and pride upon the present widespread agitation in behalf of increasing the requirements for matriculation in our medical schools. And yet many problems difficult of solution here present themselves. These questions are foreefully handled by Dr. John M. Dodson in *The Journal of the American Medical Association* for May 22, 1909, in a discussion concerning the combination of the courses for the degrees of A.B. or B.S. and M.D., a plan that is in vogue in many present-day universities that are fortunate enough to have a medical department of their own. Several variations of the combination of courses are offered by the various schools; in some the freshman and sophomore years only are taken in the university curriculum proper, the junior and senior years being occupied by those sciences which constitute the first two years of the medical course, thus enabling the student to receive both the bachelor's and doctor's degree at the end of six years. In others the first three years of the university course are followed by four years in the medical school, while in still others the bachelor's degree received at the end of the four years' university course entitles the recipient to the equivalent of a year's credit in a medical college.

It is a regrettable fact that this plan of a combination of courses is being condemned by a number of prominent educators of the country, they even going so far as to class it as a dangerous and pernicious process. By allowing the medical college work to count for the senior work in the university one set claims that the university is robbed of the student just at the time it needs him most—certainly a decidedly selfish and one-sided view of the affair to take, for when one stops to think that the average age for the high-school graduate is eighteen and that his pre-medical, medical and hospital training is

going to consume another seven to ten years, one will readily realize that the young man of average means and healthy appreciation of his responsibilities in life feels that it is high time that he take up the cudgel for himself and at least begin the struggle for a livelihood, for the beginning years in the practice of medicine are, as we all know, none too lucrative, to say the least.

To say that the combination and condensation of the courses is degrading either to the bacheloate or the medical degree is equally narrow and shortsighted. A few medical colleges there are in the United States, of course, which require a bachelor's degree for entrance into their freshman years, but as yet these are limited to less than five, and, what is of vastly greater importance, there are relatively few prospective medical students who feel that they can afford to put in eight years and yet have had no hospital service. So that it remains to consider what might be called the middle-class medical student —viz., that class which can or will find a way to acquire something more of a pre-medical training than that afforded by the high school course—and we believe this class can be made to include the majority of all medical students. Now, then, if such a student feels that he can afford, and is willing to put in, seven or even eight years in the aquirement of a liberal, as well as a scientific education, will not his bachelor's degree obtained during or at the end of his medical course represent fully as much, if not more, actual mental training than four years put in a university course with no definite aim or goal toward which to work? When he receives his bachelor's degree at the end of six or seven years will he not, by virtue of two or three added years of scientific mental training, give promise of making a more useful citizen and a greater economic factor in his community? As for degrading the degree of doctor of medicine by such a combined course, if we rule out those few schools which require a bachelor's degree for entrance, there remains absolutely no argument. Were the records of the qualifications upon which students have been admitted to the various medical schools for the past fifteen years reviewed the composite would doubtless fall far below the requirements for a diploma from a present-day high school. Yet the degree of doctor of medicine has been granted these same students after a course of two, three or four years in a medical school. Surely an arrangement whereby these pupils could and must have had at least two years' university training before entering upon a four

years' medical course could only be construed as a distinct advance over the previous significance of the medical degree.

True it is that medical colleges are enrolling fewer students at present than they did several years ago by reason of the increased entrance requirements, but even a layman knows that the world is not crying for more, but better doctors.

When this question of requiring a certain number of years of university, pre-medical training for the medical matriculant, came up several years ago, there were certain colleges belonging to the American Association of Medical Colleges which objected on the ground that any further increase in the entrance requirements would possibly keep out of the ranks many who would subsequently prove to be so-called "medical giants." This view is equally narrow and selfish with that of those college presidents and educators who decrie the combination of courses. As a matter of fact, the man who determines to get an education, be it of one or of ten years' duration, can get it if he has the grit, although no one could blame him in the effort to complete his courses in as short a time as possible. One only needs to observe the respect and consideration commanded from his fellow-students by the man who is "working his way through" to know that it not only can be, but is readily, possible for this future giant to meet the increased entrance requirements.

Let us keep the standards moving along at a constantly rising, yet wholesome, pace, always having a regard for that which best meets the needs of the greatest number.

MASSACHUSETTS LEADS OFF.

With his usual tact for hitting the nail upon the head in things pertaining to the public health Editor Bok has the following to say concerning quack advertisements in newspapers:

"One of the worst contributing causes to the 'sowing of wild oats' by young men is the quack advertisement in the average newspaper that practically says to him, and says in the most convincingly-worded language: 'Go ahead, and we will take care of the consequences.' In the confessions of hundreds of young men this contributing cause has been revealed. And just here is where the wise-headed legislators of Massachusetts have stepped in, and with this excellent law have cleaned up their newspapers:

"Be it enacted, etc., as follows: Whoever publishes, delivers, distributes, or causes to be published, delivered or distributed, any adver-

tisement, statement or notice, other than a label which is attached to a bottle or package of medicine, or which is contained in a sealed package of medicine, describing the causes, symptoms, details or effects of a venereal disease, or of a disease, infirmity or condition of the sexual organs, for the purpose of calling attention to or advertising a person from whom, or an office or place at which, information, treatment or advice may be obtained concerning such diseases or conditions, shall be punished by imprisonment for not more than six months, or by a fine of not less than fifty nor more than five hundred dollars, or by both such fine and imprisonment. But the prohibitions of this act shall not be deemed to apply to the printing or delivering in sealed packages outside of this commonwealth of books, pamphlets or circulars containing such advertisements; nor to newspapers printed outside of this commonwealth."

"It has been found absolutely useless to appeal, on the score of principle, to the proprietors of the average newspapers to omit this class of advertising. The only way is to do as Massachusetts has done: to compel its newspapers to 'clean house.' And what the New England commonwealth has done every state can do and should do. Here is, at least, something tangible that every father and mother can do as a definite protection for their sons and daughters: Individually to insist that their state will do this much to safeguard its young people."

What a pity that it remains for a lay journal to point out the way to us who have so long felt the need of just what the people of Massachusetts have gained! Every doctor knows that four out of every five patients who come to him with venereal infections either have been or will ultimately be treated by some advertising quack who would be the last person on earth to explain to the patient the dangers of his disease, not only to himself, but more especially to his wife and children. What cares this grafting charlatan about the innocent wives and mothers approximately seventy per cent. of whose gynecological operations are the result of an old Neisserian infection carried by their husbands or the twenty per cent. of the world's total blindness due to the same cause? And how much better than these same quacks are those newspaper managers who for a few paltry dollars will publish what in their own souls they know to be not only absolute lies but slight unction for the remorse of the misguided youth who is thus encouraged to continue his downward path! There can be no question that these pernicious newspaper exhibits

are at the foundation of the sexual neurasthenias and psychasthenias that have in some cases led up to actual insanities.

It seems almost unbelievable that mothers and fathers who remain so reticent about informing their sons and daughters concerning the true and natural physiologic processes of the two sexes and all their sacredness that should be held inviolate, go along perfectly content to allow daily papers to come into their homes fairly teeming with alarming pathologic suggestions about the most natural processes, and yet whose physiology is held from the growing child as a blank sheet. And, as Editor Bok says, time has amply demonstrated that, so long as the good people remain willing subscribers to such well-decorated sheets, the purse of the newspaper man continues to lengthen by these good-paying advertisements without any simultaneous blow to his conscience.

Good for old Massachusetts! It is some consolation to know that there is at least one state in the Union that has backbone enough to force its newspapers to be decent, whether they want to or not.

GASTRIC ULCER.

Some very interesting and practical points concerning the diagnosis of gastric ulcer and the subsequent operative findings are presented in the May number of the *American Journal of Medical Sciences* by Dr. J. N. Hall, professor of medicine in the Denver and Gross Medical College.

The series is made up of fifty consecutive cases of gastric, pyloric and duodenal ulcers, the diagnosis of which was verified at operation. In eleven cases the trouble dated back from eighteen to thirty years and nine had existed for from ten to fifteen years. Thirty-three were in origin pyloric, thirteen gastric and four definitely duodenal. In thirty cases the stomach was dilated and splashing was present in twenty-six of these thirty.

The author does not believe that the diagnosis is made sufficiently often where it is justified by the symptoms and findings, much to the patient's detriment, and it was in the effort to bring out the relative frequency and value of the various symptoms and findings present that the study was undertaken.

Of the fifty cases thirty-three (66 per cent.) had had vomiting, seventeen (34 per cent.) had suffered hematemesis and four (8 per cent.) had passed blood by the bowel. Forty (80 per cent.) had suffered considerably from sour stomach, forty-one (82 per cent.) had decided pain, thirty-

five (70 per cent.) tenderness and thirty (60 per cent.) muscular rigidity on physical examination. From ten to twenty-five pounds loss of weight occurred in thirty-seven (74 per cent.) Of the thirty-six cases in which chemical analysis of the stomach contents was available, sixteen were of active gastric and pyloric ulcer, twelve of these showed high acidity, while four were below normal. Of the seventeen cases of healed ulcer fifteen were below normal in acidity.

Tenderness over the lower ribs, generally on the left, was frequently noted, and some cases presented great hyperesthesia over the immediate seat of the ulcer. The author thinks adhesions about a healed ulcer may account for the rigidity in many cases. One case showed the scar of an old ulcer adherent to the liver, another to the pancreas, and three others scars adherent to the gall-bladder.

In this series it was found, as the Mayos have pointed out, that those patients with such gastric dilatation as to preclude the stomach's ever regaining its motor function, pursued an unfavorable course, and similarly in neurasthenics suffering from simple, atonic dilatation, the outlook was not good for operative relief. The author believes from his findings that dilatation occurs quite as often from the irritation and consequent pyloric spasm from an ulcer in that region, or perhaps from the hyperacidity, as from actual mechanical obstruction, and therefore declares in favor of early operation before scar formation occurs.

The author's criticisms on our present-day attitude toward a diagnosis of gastric ulcer are well-defined, as follows: "That we are, first, inclined to look upon the disease as a comparatively rare one instead of a very common one; second, that we are inclined to look for a too classical history, especially of vomiting and hematemesis, with a high acidity reported from the laboratory; third, we are inclined to place altogether too much reliance upon the chemical findings and too little upon the results of physical examination, and are therefore making far too many diagnoses of hyperacidity when the finding by careful examination of the slightest unilateral rigidity in the epigastric region, associated with local tenderness, should lead us to diagnose ulcer instead."

The chemical evidence will vary with the age of the process, the hyperchlorhydria disappearing with the onset of a chronic gastritis, or marked dilatation from obstruction, or anemia, and such absence should not negative the diagnosis of ulcer. The broader ground is urged—

viz.: that in the presence of persistent indigestion, even though not of an acid character, pain, tenderness, vomiting, or rigidity, or two or three of these phenomena—ulcer is probably present, even in the absence of hyperacidity. It is the opinion of the author that our patients will be better off if we lean a little too much toward the side of ulcer and too little to that of simple hyperacidity.

These views coming from an experienced medical clinician, who has had the unique experience of following fifty consecutive cases of gastric ulcer through operation, with a resulting opportunity to check up all phases of the diagnosis, both typical and atypical features, should carry considerable weight with all interested in this particular subject.

But a few years ago one of the great surgeons of our country was credited with saying, somewhat facetiously perhaps, that every gastric ulcer should be cured at least nine times medically before resorting to operation. How obviously unfair to our patient such a course would be in the light of our present-day knowledge of gastric and pyloric ulcer is shown by a study of the pathology wrought by acute and chronic gastric ulcers, with the dangers of perforation, hemorrhage, malignant degeneration, adhesions to surrounding viscera, gastric dilatation, anemia, etc.

Such broad conclusions as Dr. Hall has drawn should not be taken as in any way discrediting laboratory evidence or discouraging the use of it on every possible occasion, but, rather, to get all of the data available and then, in the light of past and present knowledge, draw our deductions in the individual case.

EDITORIAL NOTES

IT HAS been decided by the Indianapolis Board of Health to give up medical inspection in the city schools on account of lack of funds. Fortunately this will only be temporary, or until the state appropriation becomes available. This unfortunate condition is due to a misunderstanding between the Board of Health and the School Commissioners. Twenty-one physicians have been serving the Board of Health several months without pay. The Board of Health has also decided to take care of all the emergency cases at the Bobbs Dispensary instead of at the City Dispensary as heretofore.

DR. J. N. HURTY, secretary of the State Board of Health, has issued an appeal entitled. "Let

Us Save 200 Lives This Year from Meningitis," in which he urges the use of the Flexner Anti-meningitis Serum, which can be obtained without expense by any practitioner of the state from Dr. Homer Woolery, Bloomington, or Dr. Walter D. Hoskins, Indianapolis, both of whom are professors in the medical department of the Indiana Medical University. It is to be hoped, says Dr. Hurty, that the use of the anti-meningitis serum will not be delayed, as was the case with the diphtheria antitoxin.

THE Pathological Museum of Indiana University reports having recently received from Dr. M. F. Porter, of Fort Wayne, Ind., a most interesting and unusual specimen of intestinal obstruction. The entire length of the small intestine was obstructed by being thrown into folds and pleats by the contraction of a thickened and fibrosed peritoneum. The specimen has been studied carefully by Professor Welch, of Johns Hopkins University, who has pronounced it absolutely unique. It has been so prepared as to show by simple manipulation the enormous shortening to which the gut has been subjected by the contraction of the cicatricial tissue, and the almost complete obstruction thus produced in the lumen.

INDIANAPOLIS was well represented at the American Medical Association in point of attendance. Drs. J. F. Barnhill, E. D. Wales and L. F. Page attended the Laryngological Association at Boston and from there went on to Atlantic City. Among those present at Atlantic City were Drs. E. D. Clark, George J. Cook, Thomas B. Eastman, J. H. Ford, J. N. Hurty, F. W. Foxworthy, A. B. Graham, W. D. Hoskins, A. C. Kimberlin, J. J. Kyle, H. F. Allen, William Shimer, David Ross, Orange Pfaff, J. H. Oliver, H. O. Pantzer, Frank Wynn, George W. Combs, W. N. Wishard, H. H. Wheeler and H. C. Sharp. Dr. Sharp is the only Indianapolis physician to present a paper before the association, his subject being "Vasectomy as a Means of Preventing Procreation in the Unfit."

ON MAY 20 AND 21, at Indianapolis, the fiftieth annual session of the Indiana Health Officers' School was conducted by the State Board of Health. The sessions were held in the palm room in the Claypool Hotel. Dr. M. P. Ravelan, professor of bacteriology and pathology in the University of Wisconsin, delivered two addresses, one on the "Sources and Modes of Infec-

tion in Tuberculosis" and the other on "The Prevention and Modern Treatment of Tuberculosis." Dr. C. A. L. Reed, of Cincinnati, delivered an address on the "National Department of Public Health and its Relation to some Sanitary Problems in Indiana." Governor Marshall welcomed the visiting physicians to the city, and Dr. H. O. Bruggeman responded thereto. Dr. Robert J. Aley, state superintendent of public instruction, spoke on "School Sanitation." Dr. J. V. Keene, health commissioner of Wayne County, spoke on "What Health Officers Can Do to Better School Hygiene." Dr. J. E. Earp read a paper on "Medical Arithmetic." Dr. Severence Burrage, professor of hygiene at Purdue University, told "What a Health Officer Should Know." Dr. G. C. Markle, health commissioner of Randolph County, spoke of "The Management of Infectious Diseases." Dr. H. E. Barnard, state food and drug commissioner, gave an illustrated lecture on "The Sanitary Condition of the Southern End of Lake Michigan." Dr. J. P. Simons, superintendent of the State Laboratory of Hygiene, discussed "The Bacilli Carriers in Relation to the Public Health." Dr. W. T. S. Dodds talked on "Anti-Tuberculosis Work in Indianapolis," and Dr. G. B. Lake, of Wolecottville, on "Ventilation of Rural Districts." Dr. W. D. Hoskins spoke on "The Diagnosis and Treatment of Cerebrospinal Meningitis," and Dr. Walter N. Sharp read his paper on "Prevention of Ophthalmia Neonatorum." Dr. Hurty closed the meeting with a talk on "The Law, the Rules and Examinations." After the last evening meeting the Indianapolis Medical Society gave a smoker and reception in honor of the visiting physicians.

DEATHS

WILLIAM HUGHES, M.D., of New York University, died at his home in Lima, Ind., May 13, aged 70.

DR. ANDREW J. BOBBS, of the Medical College of Ohio, a pioneer practitioner of Marion, died at his home in that city May 13, aged 76.

JOHN W. COOPER, M.D., a graduate of the Barnes Medical College, St. Louis, formerly of Terre Haute, Ind., died at his home, near Roff, Okla., recently, aged 35.

DR. JOHN HAMMEL, aged 55, died at his home in Buckskin, Ind., May 12. His health had been

failing for about a year, and his condition had been serious for several weeks preceding his death.

MRS. BEULAH B. TUBBS, wife of Dr. George R. Tubbs, of West Point, Ind., died at the Deaconess Home Hospital, Indianapolis, May 4, of cholecystitis, aged 25 years. She was an accomplished musician.

DR. HENRY T. COTTON died at his home in Zionsville, Ind., May 29, from la grippe at the age of 76 years. He was a graduate of the Indiana Medical College of Indianapolis and the Rush Medical College. He had practiced at Zionsville for the past 25 years.

MRS. ALBERT E. STERNE, wife of Dr. A. E. Sterne, Norways, Indianapolis, is said to have died Tuesday, May 25, 1909, at Indianapolis, after several weeks' illness from pyemia following appendicitis, for which she was operated on about seven weeks previous to her death. Those of us who were fortunate enough to have known Mrs. Sterne will long remember her as one of the daintiest and most cultured type of woman, and through its columns THE JOURNAL begs to offer Dr. Sterne its deepest sympathies in the dark hours following a loss that will be so generally felt.

DR. T. B. CAMPBELL, of West Lebanon, president of the Fountain-Warren County Medical Society, died of pneumonia May 31, 1909, after a three days' illness. Dr. Campbell was born at Zanesville, Ohio, June 6, 1842; graduated from Bellevue Hospital Medical College in 1871. He located at Marshfield, Ind., in 1865, where he practiced for a year, then removed to West Lebanon in 1870. He took a postgraduate course at Rush Medical College from 1880 to 1882. He was a member of the U. S. Pension Examiners for Warren County, a charter member of Wabash Railroad Surgeons, and member of the American Association of Railroad Surgeons.

PERSONALS

DR. THOMAS J. BEASLEY was recently elected president of the Hendricks County Medical Society.

DR. RILEY SHRUM, of Bedford, left the first of May for Arizona, where he is spending a few weeks.

DRS. A. C. KIMBERLIN, JOHN J. KYLE and GEORGE D. KAHLO and wife are among the travelers to Europe this summer.

DR. O. W. RIDGEWAY has moved his office to 1716 East Washington street, Indianapolis, taking Dr. W. H. Foreman's old location.

MR. JOHN TALBOTT, of the class of 1910 of the State Medical College, has been made externe at the Rockwood Tuberculosis Sanitarium.

DR. JAMES STEWART, ex-president of the Indiana State Medical Association, received a serious injury May 15. He is slowly recovering.

THE marriage of Dr. Thomas J. Dugan and Miss Alice Shiel, daughter of R. R. Shiel, Indianapolis, will take place some time this month.

DR. E. H. ELMORE, of the Indiana University School of Medicine, has been appointed to succeed Dr. E. V. Davidson at St. Elizabeth's Hospital at Lafayette.

DR. W. A. BUNTIN has given up his office in the Newton Claypool building, Indianapolis, and gone into business with his father in the Buntin Drug company, of Terre Haute.

DR. ARTHUR GUEDEL has completed his hospital year in Indianapolis City Hospital and has decided to open an office there. He was recently married to Miss Dorothy Fulton, of Columbus Ohio.

THE many friends of Dr. W. H. Wishard, of Indianapolis, will be sorry to learn that he had a slight stroke of apoplexy. However, he has recovered from it nicely, though he is still confined to his home.

DR. FRANK C. BOONE, of Merom, Ind., and Miss Bertha Lee Stanley, of Cleveland, Ohio, were married in St. Louis May 3. After a visit to the west they will return to Merom, where they will make their home.

CAPTAIN FRED W. PALMER, who has been the surgeon at Fort Benjamin Harrison, Indianapolis, has been assigned to one of the posts in Alaska. Major Powell C. Fauntleroy has been appointed to take his place.

THE malpractice suit against Dr. J. C. Fulton, Bluffton, was dismissed May 12 as a result of evidence showing that Dr. Fulton did not treat the case. The suit was dismissed on motion of the attorneys for the plaintiff.

DR. B. H. COOK, secretary of the Madison County Medical Society, has been confined to his room for eight weeks as the sequel to a railway wreck while attending the Eighth District Medical Society about eighteen months ago at Muncie.

DR. W. N. WISHARD gave the commencement address May 27 to the graduating nurses of the Protestant Deaconess Hospital in Indianapolis. He recalled many of the experiences which he had as superintendent of the City Hospital in 1879, which at that time had only three nurses in the institution, one male and two females.

DR. EDGAR F. KISER, who has been superintendent of the Indianapolis City Dispensary for the past three years, has resigned, and Dr. J. P. Christy, the present superintendent of the Bobbs Free Dispensary, will have charge of the combined institution. Dr. F. L. Taylor, Dr. C. C. Duncan and Dr. W. A. Deerhake, who have been city dispensary internes, will continue their services temporarily.

NEWS, NOTES AND COMMENTS

THE State Board of Health, after making sanitary surveys, has condemned 24 school houses on account of insanitary conditions.

THE physicians of Booneville have organized a local medical society with Dr. Walter P. Robinson president and Dr. William P. Ford secretary.

Most of the doctors of Warsaw have entered into a physicians' protective association, one of the main purposes of which will be the establishment of a list of those people who can but do not pay their doctor bills. The fee bill is to be revised.

THE Indianapolis Chapter of Phi Beta Pi held its annual pig roast at the Rockwood Sanitarium Saturday night, May 8. Dr. J. E. Earp acted

as toastmaster, while the speakers of the evening were Drs. C. S. Woods, C. O. Lowry, John Thrasher and P. B. Coble.

ON JUNE 1 the City Dispensary at Indianapolis will be moved from its quarters at the police station to the Bobbs Free Dispensary, and the internes are to be selected by the college. This will make the enormous amount of clinical material of the City dispensary available for the students of the medical college.

The Methodist Hospital in Indianapolis is being remodeled in order to care for more private patients, as there is too much room in ward space and the capacity for private patients has been taxed heavily. Twelve new rooms have been made out of some of the old wards.

The State Board of Health has determined to ask the next legislature to amend the law regarding marriage licenses and make it even more stringent. It is planned to have marriage licenses issued jointly by the county health officer and the county clerk in order to reduce the minimum danger of transmission of disease through marriage.

PLANS for the proposed tent city for tuberculosis patients were discussed at the meeting of the South Bend Anti-Tuberculosis Society April 14 and an agreement was made to proceed with the scheme, and to establish three shacks at the Orphans' Home, Mishawaka, at once, and to locate others in South Bend in the very near future.

At the March meeting of the Fifth Councilor District Medical Society, held at Terre Haute, the officers elected for this year were as follows: President, E. Hawkins, Greencastle; first vice-president, I. M. Casebeer, Newport; second vice-president, O. E. Maddox, Rockville; treasurer, M. A. Boor, Terre Haute; secretary, J. R. Gillum, Terre Haute.

THOSE who contemplate taking space in the hall devoted to commercial exhibits at the Terre Haute meeting of the Indiana State Medical Association can secure information concerning space by writing the Chairman of the Committee on Exhibits, Dr. Charles N. Combs, Terre Haute. A blueprint of the space for booths will be sent upon application.

DR. GEORGE E. PETTEY, of Memphis, Tenn., has closed his Denver and Atlantic City Retreats and has sold his interest in the Oakland Retreat to his former associate, Dr. C. L. Case, who will continue the work at Oakland in his own name. Improved facilities have been provided for handling alcohol and drug cases at the Memphis Retreat, and hereafter Dr. Pettey's entire work will be done there.

Warsaw is planning for a hospital. The citizens are interested and are subscribing for stock, and the proposition is being handled in a very satisfactory, business-like way. The doctors of the city are subscribing liberally, as are those throughout the county. The plan adopted is that of a stock company, ten dollars representing one share. The newspapers of the city are friendly toward the idea, and it is expected that the plans will move forward satisfactorily.

DR. ALBERT E. STERNE has had the sympathy of the entire medical profession of Indianapolis in his bereavement of losing his wife. Mrs. Sterne was operated on for appendicitis, and septic thrombosis of the portal vein developed, which ultimately caused her death fifty-three days after the operation. Mrs. Sterne was a woman of excellent qualities and rare disposition and the loss will fall heavily on her husband. The funeral was held at the Norways May 27.

THE State Board of Medical Examination and Registration on April 13, after hearing evidence against Dr. James M. Towey, of Clinton, charged with having issued prescriptions for intoxicating liquors to be filled by druggists on Sundays and legal holidays, and after receiving his plea of guilty, is said to have revoked his license. At the same meeting the board declined to take up the question of reissuing the license of Dr. Charles L. Landfair, Bluffton, which was revoked when he was convicted of criminal practice.

DR. J. N. HURTY read a paper on railway sanitation at a conference of the State and National Boards of Health, which was held at Washington, D. C., the first week in June. Dr. Hurty is chairman of the railroad committee. He covered all the details of the need of railway sanitation, from sleeping cars to waiting rooms in small country towns. Particular attention was

devoted to bettering the conditions in smaller stations and to the dangers from disease germs strewn along the railway. Unusual attention is being given to railway sanitation, and also medical protection in case of wrecks. Recently the superintendents and chief surgeons of the railways in Indiana met the railroad commissioners in Indianapolis and discussed a uniform type of medical case as a part of the equipment of each car.

SOCIETY PROCEEDINGS

ALLEN COUNTY.

FORT WAYNE MEDICAL SOCIETY.

(Meeting of April 27, 1909.)

Society met at Hope Hospital in regular session, with twenty-nine members present. Minutes of previous meeting read and approved.

Clinical case reports. Dr. L. T. Rawles reported a case of trichinosis. Patient, age 23, was well until ten days before. Two days later had edema of face, and around eye socket, followed in a few days by edema of forearms. Temperature 100 to 104. Blood picture showed 28 per cent. of eosinophiles. Diagnosis made on history of eating raw pork, general edema, eosinophilia and pain in tender regions. Discussion.

REGULAR PROGRAM.

Toxemia of Pregnancy.—CASE 1.—(Dr. Porter)—Patient, female, aged 31, married; pregnant for the first time. Past two months of pregnancy had some headache, eye symptoms, and general dropsey. No albumen in urine during this time. Examination of urine by Dr. Rhamy after patient came to hospital showed 7 per cent. albumin, trace of hyaline casts, and later granular casts. The increase and decrease of albumen has been an index in the case, as when excreting albumen in large quantity she would be worse and when excreting albumen in small quantity would be feeling better. Was admitted to hospital and put on milk diet, with daily sweats. Came in twenty days prior to expected term. Day before expected confinement was taken with convulsions, and day of confinement had two more. Patient taken to delivery room, and vaginal Cesarean section performed. Albumen varied as before confinement. There was sugar in urine the day milk came into the breasts. Dr. Porter said that this condition of toxemia may arise from intestinal lesion, anesthesia, pregnancy, phosphorus poisoning, and acute yellow atrophy of liver.

Discussion by Dr. Hamilton; closed by Dr. Porter.

CASE 2.—Patient, baker, aged 57, married. Family history negative. Two weeks ago had severe pain in epigastrium, preceded by several bilious attacks. No nausea and no vomiting. Breathing suggested pleurisy. One week after onset of attack had severe chill, followed by sweating. Inspection of patient showed prominence in epigastric region. Mass gave no fluctuation at apex, and did not move on respiration. Chill, sweating and tenderness point to inflammatory lesion, perhaps malignant condition with inflammatory process on top of it. Most likely diagnosis, pus infection originating in gall bladder, with gall stones as basis. That

the ingestion of food causes no pain is against ulcer of the stomach. Have had more bakers with carcinoma of stomach than any other three occupations together.

Dr. J. H. Gilpin endeavored to show dark field illumination to see spirochete pallida, with unstained specimen, but the organisms had perished and could not be demonstrated. He explained the use of dark field illumination.

Discussion by Drs. Rhamy, Kruse, Van Buskirk and Bruggean.

Committee appointed to draft resolutions on the departure of Dr. Brown reported.

Adjourned.

J. C. WALLACE, Sec.

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(Meeting of May 11, 1909.)

Society met in regular session in the assembly room, with seventeen members present. Minutes of previous meeting read, corrected and approved.

Clinical cases. Dr. Porter reported further on the case of toxemia reported at Hope Hospital meeting. Woman still has headaches, though there is no longer evidence of liver involvement. Last report on urine showed 1/3 of 1 per cent. albumen. The old man did have pus infection. On incision got about one pint from abscess, which extended in the direction of the gall bladder.

Dr. B. W. Rhamy showed slide under the microscope, of spirochete pallida, stained by the silver method. Specimen taken from kidney removed from case of congenital syphilis.

Dr. Porter reported case of streptococcemia. Patient, boy, with fever, rapidity of pulse, wildly delirious at night. Tenderness right side in region of liver. Blood examination showed 85 per cent. neutrophiles, 22,000 leucocytes. Widal reaction positive on first and second examinations. Decided dulness above liver and below nipple. May 6 opened and evacuated large quantity of pus, which showed clear streptococcal infection, and later examination of blood also showed clear streptococcal infection. Had not coughed at all. Did not know where infection originated.

Dr. Beall said he had had a case of malignant endocarditis giving Widal reaction, which, on postmortem, showed no evidence of typhoid. Widal reaction has been found in Weil's disease, and is found in 98 per cent. of all cases of typhoid.

Dr. Rhamy does not expect to find Widal reaction until after first week, and typhoid patients not giving the Widal reaction at all usually have a serious infection. Also liable to get a Widal reaction in tubercular meningitis. He showed organism of tertian malaria under the microscope.

Adjourned.

J. C. WALLACE, Sec.

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(Meeting of May 18, 1909.)

Society met in regular session in the assembly room, with forty members and one hundred visitors present.

Osteopathy was the title of a paper by Dr. W. D. Calvin, in which he gave a history of the cult. He said that it is simply the application of mechanotherapy. Dr. Calvin mentioned the physiological effects of mechanotherapy, and said that it is the handmaid of medicine, giving the diseases where it is of service. The author commented on Stills' autobiography; and also said that Rigg's work on osteopathy admits antisepsies of extreme value in the treatment of disease. In concluding he said that the osteopaths do use drugs.

Discussion by Dr. Buchman.

Psychotherapy was the title of a paper by Prof. B. D. Myers, of the Indiana University, in which the author said that the unconscious use of psychotherapy was very old indeed. He said that suggestive therapeutics was one of the most powerful aids used by the medical profession in combating disease; and in conclusion explained the Emmanuel movement.

Discussion by Drs. Wheelock, Porter and C. E. Barnett; closed by Dr. Myers.

Application of Dr. I. E. Schiek, of Fort Wayne, read and referred to the Board of Censors.

Adjourned.

J. C. WALACE, Sec.

CASS COUNTY.

The Cass County Medical Society held its first meeting in the new room May 27. The subjects for the evening were "Clinical Anatomy of the Abdomen," by Dr. Joseph Rubsam, and "Diuretics," by Dr. J. L. Gilbert. The new officers for the society are: President, J. C. Bradfield; vice-president, Clark Rogers; secretary-treasurer, G. D. Miller; delegate, E. D. Miller; censors, J. L. Ellert, Joseph Rubsam and R. E. Troutman.

Adjourned.

G. D. MILLER, Sec.

DELAWARE COUNTY

The Delaware County Medical Society held its regular meeting May 7. Minutes of previous meeting read and approved.

"Abdominal Pain" was the title of a paper by Dr. C. G. Rea, in which he discussed the nature and onset of pain, its dependence or non-dependence on pathologic lesions, the possibility of its being reflex or referred, and the organs probably involved when pain occurred in the various abdominal regions, and the significance of such pain.

The discussion brought out many interesting points in the citation of clinical cases in which pain had been a prominent symptom. Members present, fourteen.

Adjourned.

H. S. BOWLES, Sec.

FOUNTAIN-WARREN COUNTY.

The Fountain-Warren County Medical Society met in Attica, June 3. Dr. Frank S. Crockett, of Lafayette, read a paper on "Cystoscopic Findings," and Dr. G. Frank Lydston, of Chicago, gave a chalk talk on "The Prostate." The discussions proved of universal interest to the society, and a vote of thanks was extended to the visitors for their able lectures. Resolutions were passed relative to the life and death of T. B. Campbell, M.D., president of the society.

HENDRICKS COUNTY.

The Hendricks County Medical Society met in regular session April 23. Dr. Carter, of Plainfield, read an instructive paper on "The Tuberculosis Conference at Washington," and Dr. Beasley, of Rockwood Sanitarium, led in the discussion, giving his experience with recent discoveries in the treatment of the white plague.

Dr. C. A. White, of Danville, spoke in an optimistic vein regarding the fight on tuberculosis, and argued that medical science was getting the upper hand.

Dr. Simonds, of the State Laboratory, read a very interesting paper on "Trichina," based especially on the recent fatal case in the practice of Dr. Royer, of North Salem, and also a recent fatal case at Elwood. Both cases were caused by eating raw or poorly cooked sausage. Microscopic slides and photographs were exhibited.

The annual election of officers resulted as follows: President, T. J. Beasley; vice-president, Claude White; secretary-treasurer, W. T. Lawson; delegates to state association, Drs. Allred and Beasley; alternates, Drs. Royer and Lawson.

Adjourned.

W. T. LAWSON, Sec.

KOSCIUSKO COUNTY

The regular meeting of the Kosciusko County Medical Society was held May 25. Minutes of previous meeting read and approved. The head of a tapeworm (*Tanias saginata*) was shown by Dr. C. N. Howard, who had effected its capture through the use of the oleoresin of male fern. The specimen developed an interesting discussion as to the most effective means of ridding the intestine of this parasite. President Burkett had obtained success in securing the worm when he used pomegranate root. He uses four ounces to a pint of water, boiling the solution down to six ounces, which is taken in three doses—two ounces every hour. This treatment is preceded and followed by a saline purge.

"Microscopic Diagnosis of the Different Malarial Fevers" was the title of a paper by Dr. C. Norman Howard. Discussion by Drs. DuBois, Burkett, Young, Shackelford, Yocom, Leedy, Anglin, Ford and Thomas.

The Board of Censors having reported favorably, Dr. J. W. Heffley, of Mentone, was unanimously elected to membership in the society.

Adjourned.

C. NORMAN HOWARD, Sec.

MADISON COUNTY.

The Madison County Medical Society met April 25 in the city library, Anderson.

"The Inspection of School Children" was the title of a paper by Dr. J. M. Stoddard in which he said that no child should be permitted to enter school unless free from disease.

Prof. J. B. Pearcy and Hon. W. B. Campbell, of the city schools, were present and took an active part in the discussion. The May meeting was postponed, but the June meeting will be held in the County Infirmary June 25, and an all day session is being arranged.

Adjourned.

B. H. COOK, Sec.

MARION COUNTY.

THE INDIANAPOLIS MEDICAL SOCIETY.

(Meeting of April 6, 1909.)

Society met in regular session. Program was made up entirely of case reports.

CASE 1.—Dr. A. S. Jaeger reported a case of hyperthermic typhoid fever. Symptoms typical of typhoid with lobar pneumonia. Patient had very high temperature, reaching $108\frac{1}{2}$, followed by crisis. The pneumonia ran a severe course throughout, there being several hemorrhages, the last one apparently causing patient's death.

CASE 2.—Elephantiasis Mammaria and Supernumerary Mammaria; with photograph. Patient, 16-year-old prima

gravida. Breasts were not disproportionately large before pregnancy. Paotograph was taken with patient propped up in bed; when standing the breasts reached slightly below the umbilical line. The supernumerary breasts developed in each axilla about the fifth month of pregnancy, and the semblance of a nipple appeared on the right, but none on left. At time of delivery the supernumerary glands were about the size of duck's eggs. Milk from extra glands proved normal.

"Cholecystotomy Under Local Anesthesia." Case report by Dr. A. B. Graham. Patient presented three especial points of interest: Intense pruritis; the operation (cholecystotomy) was done under local anesthesia; hemorrhage was evidently a contributing factor in causing death. Patient, farmer, aged 68, previous health excellent, was seized with sudden, intense pain in epigastrium, which subsided, followed in ten days by jaundice. The only symptom complained of was intolerable itching. There was tenderness on pressure over gall bladder. Operation under local anesthesia. Patient stood operation well, but twelve hours after suddenly collapsed and died within an hour. Autopsy revealed considerable hemorrhage in abdominal cavity, and a hard tumor involving common duct and blocking almost completely the duct. The tumor proved to be carcinoma of the bile duct, of the mucoid type.

Dr. T. B. Noble reported a nephrectomy during fifth month of pregnancy. History of a tumor in right iliac fossa for five years. A few months before examination had grown until it occupied the upper half of the right side of abdomen. Pregnancy proven by fetal movements. Operation under local anesthesia, and large cystic tumor removed, which was diagnosed as an adenocystoma with calcareous deposits. Patient made an uneventful recovery and went on to normal parturition.

Dr. J. P. Simonds exhibited under microscope slides showing Negri bodies. He discussed briefly the search for some accurate diagnostic procedure in rabies, the specificity of the Negri bodies and their staining peculiarities. He reported ten cases of trichinosis, two of which died, and tissues from them sent into the laboratory. In all cases there was definite history of eating raw or semi-cooked uncured pork.

Dr. R. O. McAlexander. "Pancreatic Cyst Associated with Cholelithiasis." Patient, woman, aged 30, mother of two children. Twelve years ago had indefinite gastrointestinal symptoms, which completely disappeared. Two years ago again suffered attacks of pain and indigestion; at this time she weighed 218 pounds. The attacks continued and she was confined to her bed by almost continuous suffering in stomach. Was constantly hungry. Had some vomiting, belching, constipation, with occasional diarrhea, but no mental disturbance. Lost ninety pounds in weight. At this time tumor was discovered, about the size of a fetal head, above umbilicus, in median line; round, smooth and movable. On operation it was found to contain about three pints of dark green fluid. Gall bladder was distended and contained a number of concretions, but no calculi were found in pancreatic cyst. Healing occurred by granulation, but only when the margins were protected from contact with the discharge. Later she developed a typical case of typhoid, and wound reopened and discharged slightly during the course of the disease. With recovery from her illness came spontaneous closure of sinus. She is now in perfect health and weighs 260 pounds. No history of trauma.

Dr. J. F. Barnhill. "Some Unusual Cases of Suppuration of the Temporal Bone and Its Environment." Dr. Barnhill formerly believed that suppuration in temporal bone was always preceded and accompanied by a discharging ear. The following cases show that this is not always true:

CASE 1.—Child, had acute sore throat (probably tonsillitis), followed by severe pain in ear, but no discharge from ear at any time. When seen three weeks later mastoid was swollen, red and extremely tender. Temperature 101 F. No perforation or scar visible about drum membrane, no discharge present, and all the structures at the fundus of ear looked quite normal. The mastoid was opened and found to be extensively softened, necrotic and filled with pus.

CASE 2.—Male adult, several months previous had an acute attack of la grippe, when he suffered with severe earache, and at that time he said the ear discharged slightly two days. Since that time has suffered intense pain on the same side of head almost constantly, especially over temporal region and mastoid. Examination of patient was negative, but he insisted on operation. Mastoid antrum was found to be perfectly normal. On uncovering sinus, pus burst through as soon as chisel penetrated sinus groove. The abscess was perisinuous, but sinus itself was not involved. Patient made complete recovery.

CASE 3.—Patient, woman, suffered from acute mastoiditis during winter of 1904. Ear discharged freely then. Operation refused, disease subsided, and in about two weeks she seemingly recovered. In February, 1909, pain developed in mastoid region, and over the lateral and sigmoid sinuses, accompanied by slight chilling and rise of temperature; marked but not acute tenderness over mastoid, but no swelling. Operation showed softened bone in mastoid, but no pus. Dura was injected showing localized meningitis, but sinus was healthy. Thirty-six hours later, the symptoms remaining the same, at the solicitation of the family, a second operation was done, exploring the middle cerebral and cerebellar fossa, but nothing was found except a severe meningitis, which was now general, and a high intracranial pressure caused by the inflammation, and the large amount of serous exudate. Death two days later.

Dr. G. M. Wells. CASE 1. "Flat Feet Simulating Rheumatism." Patient, domestic, aged 35, had suffered much pain in feet and legs, which was called rheumatism and treated as such. Pain was in the feet and calves of the legs, and would persist during night, preventing sleep. No relief had been afforded by different styles of shoes tried. On examination the signs of flattened arches were typical, and properly adjusted metal arches gave immediate and complete relief. He found brass the best material for these arches.

CASE 2.—"Lumbricoid Worms and Intestinal Obstruction in a Very Old Person." Patient, woman, aged 81, who for five months had been passing lumbricoid worms at irregular intervals. Suddenly developed evidences of acute obstruction of bowel. Five and a half days later obstruction gave way and bowel moved freely. It could not be determined whether the worms had blocked lumen of bowel or not.

Dr. G. B. Jackson. CASE 1. Puerperal sepsis, the lochia showing intracellular diplococcus of Neisser. High fever followed by chill; rapid pulse. Diagnosis septic thrombophlebitis. After ten days of stormy fever symptoms suddenly subsided with marked diarrhea with pus and blood in feces. Diagnosis, rupture of obscure abscess and discharge per rectum. Emphys-

ema of pelvic tissues occurred by entrance of air through vaginal tear during relapse.

CASE 2.—Mrs. T.; tenth child, labor at term. History of traumatic ablation at last delivery, which was by forceps. Dry labor. Preparations made for incision of womb, but spontaneous dilatation occurred with normal delivery. Chill and fever on sixth day. Lochial examination showed Neisser's diplococcus. Large cellular exudate in left pelvis, of bony consistency. Persistent fever for forty-six days, followed by complete resolution of mass and recovery.

Adjourned.

R. H. RITTER, Sec.

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(Meeting of April 13, 1909.)

Society met in regular session. The paper of the evening was by Dr. A. C. Kimberlin, on "The Diagnosis and Some Surgical Considerations in Purulent Inflammation of the Pleura," in which he described the antecedent conditions of this condition, mentioning the fact that almost always in these cases there is considerable inflammation of lung tissue before the purulent pleurisy, but the rapid formation of a large amount of exudate may come so quickly as to mask the original lesion and make the case very confusing. Pressure symptoms and other evidences of the presence of fluid during the course or soon after an attack of lobar pneumonia should call for exploratory puncture to determine character of fluid. Behavior of the fluid depends almost wholly on the presence of adhesions, which are almost always present in pyothorax, and are formed with great rapidity, confining the pus to certain pockets, which require the greatest nicety of percussion to determine accurately. One aid in diagnosis is the study of the displacement of the thoracic and upper abdominal viscera. Displacement of heart is often a sign of value. When there is pus in contact with pericardium, drainage should be done as early as possible to avoid adhesions of pericardium and fixation in an unnatural position. The exploratory needle should be reserved to confirm or disprove our suspicions based first on thorough physical examination. The x-ray diagnosis should be regarded as a valuable means of confirmation only.

With reference to treatment, the author said that it was always surgical, though there are many features that can only be fully worked out by joint action of surgeon and internist, the latter being best fitted to map out the fluid and advise best field of operation. The old stereotyped points of incision are of little value. Gymnastics later in the course of the case should be used with great caution, as they are capable of great harm as well as great good.

Discussion by Drs. Potter, Ross, Pantzer, Keene, Thorner, T. B. Eastman and Wynn and closed by Dr. Kimberlin.

Adjourned. H. R. MCKINSTRAY, Sec. Pro Tem.

* * *

(Meeting of April 20, 1909.)

Society met in regular session. The first paper was by Dr. T. B. Eastman, on "The Laboratory Man and the Pulse Feeler," in which he said that while the laboratory researches have added to our knowledge, the practical application of these discoveries has been made by untrained and unskilled practitioners. The laboratory methods are seductive and have overshadowed those qualities of personal influence over the patient and close clinical observation that characterized the

older successful physicians. He cited Jenner and Lister as proofs of his assertion.

Dr. H. R. Allen read a paper on "Suggestions to Men in General Practice," in which he said that the world has made more mechanical progress in the past forty years than during all the years since the creation of the world; mechanical perfection is creeping into every profession and will have to come into the medical profession. He pointed out a number of startling examples of conventional treatment now advocated and used in years past, that not only fail in mechanical accuracy, but actually contradict mechanical possibilities. Especially in the treatment of fractures there is room for improvement. He asserted that there is no need for haste in adjusting the fragments; no necessity for anesthetics nor opiates; the use of weight and pulley in fracture of the femur is worse than useless. He never gets any shortening, and in fact is not satisfied unless there is one-eighth inch of overcorrection. Plaster and leather jackets, corset braces and other conventional spinal appliances are absolutely devoid of mechanical soundness. Club feet are correctable in ten minutes, and there is no age limit.

Concerning flat-foot, Dr. Allen said there were a dozen varieties with a dozen causes. The commercial steel and celluloid arches are appropriate only to one of the dozen varieties; they utterly ruin the other eleven varieties. A steel arch stretches out the tendon of the flexor brevis digitorum and the fasciae, taking away the string to the bow until the arch must inevitably flatten out under the body weight. These artificial appliances should never be used for a weak foot or ankle, nor for a tubercular joint.

Discussed by Drs. Earp, Hodges and Brayton. Closed by Dr. Allen.

Adjourned.

R. H. RITTER, See.

* * *

(Meeting of April 27, 1909.)

Society met in regular session. The paper of the evening was on "Psychotherapy," by Dr. F. F. Hutchins. He said that disease presents five conditions for treatment, viz.: (1) Organic conditions requiring surgical care; (2) chemical changes requiring food; (3) poisons and infections requiring elimination and destruction; (4) disturbances of the pituitary and thyroid glands and suprarenal capsule; (5) functional disturbances and bad habits. Psychotherapy is applicable in the last form, and is to be used in conjunction with the other forms of treatment. The effect of the mind on the body may be explained in three ways. 1. The body is the instrument of the mind, to obey its dictates and obey its judgment. 2. The brain is the result of developing functions, the number and variety of functions determining the size of the brain which correlates and coordinates these functions; hence these functions are dependent on the brain for purposeful use. 3. Instinct or unconscious reasoning is usually more perfect than conscious reasoning. Psychotherapy has a place in organic as well as functional disturbances. The line between organic and functional diseases is very obscure, there being probably an organic basis for all. Psychotherapy resolves itself into three methods: Hypnotism or blunting the feelings; autosuggestion or substituting other ideas for the distressing ones, and a process of forgetting and re-education. The latter is the preferable method, as it corrects defects of the mind, causes the patient to develop and fits him to meet future strains.

Discussion by Prof. E. H. Lindley, of the State University; Dr. F. B. Wynn, Guido Bell, B. D. Myers, A. C. Kimberlin, and closed by Dr. Hutchins.

Adjourned.

R. H. RITTER, Sec.

MIAMI COUNTY.

The Miami County Medical Society met in regular session May 28, at Logansport, as guests of the medical staff of Longcliff Insane Hospital. Under the guidance of the staff, the fifteen members present visited the different wards. As a continuation of the society's post-graduate course in insanity a clinic was given in assembly hall. All of the different forms of insanity in the course were presented and discussed. After the clinic Dr. Terflinger, superintendent, entertained the society at dinner.

Adjourned.

P. B. CARTER, Sec.

NOBLE COUNTY.

The regular meeting of the Noble County Medical Society was held May 11. The annual election of officers resulted as follows: President, J. W. Morr, Albion; vice-president, Woodward Hays, Albion; secretary-treasurer, F. R. Clapp, Ligonier; censors, Drs. W. H. Franks, Ligonier; W. F. Carver, Albion, and John W. Green, Albion.

The papers of the session were, "The Limitations of Surgery in the Treatment and Diagnosis of Diseases of the Stomach," by Dr. Miles F. Porter, Fort Wayne, and "Intestinal Tuberculosis," by Dr. G. W. McCaskey, Fort Wayne. Discussion. A vote of thanks was extended Drs. Porter and McCaskey for their kindness in preparing and presenting these able papers.

It was decided to hold twelve meetings each year hereafter, ten to be at Albion and one in Ligonier and Kendallville.

The subject of taking up the postgraduate work of the A. M. A. was discussed and it was moved that the secretary be instructed to secure full information concerning the work and make a report at the next meeting.

Adjourned.

F. R. CLAPP, Sec.

PIKE COUNTY.

The Pike County Medical Society held its regular meeting May 13, with a large attendance present.

Coughs was the title of a paper by Dr. Abbott, of Otwell, in which he mentioned the origin of various coughs and his manner of differential diagnosis and means of cure.

The subjects of insurance examinations and pauper practice were discussed, and the consensus of opinion was that a fee of \$5 should be charged for all life insurance examinations, and that pauper practice should not be contracted for.

Fracture of the Hip Joint (impacted) was the title of a paper by Dr. Imel. Patient, 80 years of age, had but little pain, and good recovery followed.

Adjourned.

E. S. IMEL, Sec.

PORTER COUNTY.

The regular meeting of the Porter County Medical Society was held at Valparaiso May 4.

The committee on deceased members reported and was continued, it being the sentiment of the society

that it was important to have the subject well handled, and the committee did not have its information tabulated.

The applications for membership of Drs. Nesbit and Lewis were referred to the Board of Censors.

"Difficult Cases of Labor, with Particular Reference to Contracted Pelvis," was the title of a paper by Dr. Young, of Valparaiso, in which he said that rachitis in infancy was an important etiological factor, due to insufficient nonrishment in many cases. Statistics show that the majority of cases in America are women of foreign birth, Germany furnishing 14 per cent. of the total. Mensuration was advised as a routine practice when a physician is engaged for a labor. When contracted pelvis is diagnosed it should be arranged to have the labor at a hospital where Cesarean section might be done promptly should normal labor prove improbable; under such conditions the operation is not formidable and uneventful recovery is the rule; in fact, it has a lower mortality than high forceps delivery. When a Cesarean section is contemplated, vaginal interference is contraindicated absolutely. The technique of the operation was briefly outlined and records quoted show that it may easily be done in twenty minutes. General discussion.

Adjourned.

G. R. DOUGLAS, Sec.

POSEY COUNTY.

The second quarterly meeting of the Posey County Medical Society was held in New Harmony, May 21, 1909. Meeting called to order by President Holton.

Dr. T. W. Wilson reported a case of adeno-carcinoma of the uterus and ovaries. Patient was operated on last February, the ovarian tumors only being removed, the condition of the patient and inoperable condition of the uterus preventing further operation. The ovarian tumors were cystic and about the size of a pint measure. The patient gained in health and weight, and the wound healed with the exception of a place about the size of a pea. Recently the patient has had considerable metrorrhagia, but otherwise is apparently well. Microscopic slides of the tumor were exhibited. Discussion.

The election of officers resulted as follows: President, I. L. Turman; vice-president, C. Arburn; secretary-treasurer, C. L. Rawlings; censors, Drs. Barret, Fullenwider and Boren; delegates, Drs. Barret and Doerr; alternates, Gudgel and Rawlings.

Dr. W. M. Ehrlrich, of Evansville, addressed the society on the subject, "Treatment of Some of the Diseases of the Prostate." The diseases considered were acute prostatitis, and senile enlarged prostate, the treatment of the former being palliative. If abscess forms, perform prostatectomy rather than massage. Massage only after acute inflammation subsides.

The various methods of operating for enlarged prostate were discussed. Dr. Ehrlrich exhibited a specimen obtained by massage of a subacutely inflamed prostate.

Dr. J. W. Powell was reinstated to membership, and the name of Dr. W. L. Miller was proposed for membership.

Adjourned.

C. L. RAWLINGS, Sec.

SPENCER COUNTY.

The regular meeting of the Spence County Medical Society was held May 18 at Rockport. Minutes of last meeting read and approved. Dr. L. H. McCory, a visit-

ing physician, reported a case of mastoid infection, and was advised to have the patient operated upon.

Dr. J. C. Jolly gave an interesting talk on "The Practice of Medicine as a Business." He places the profession at least second if not first above any profession. He stated that there were graduates of medicine who are not fit to practice; they are not moral, nor fit to make a diagnosis, and if they do, some few are not able to treat cases intelligently. We should be honest with our patients. The man who has practiced medicine for twenty-five years and not accumulated \$10,000 is a failure. There are different kinds of assets, such as bank stocks, etc., but the man who has educated a large family is as much a success as the one who has his stock in banks, etc.

Shall the Physician Dispense His Own Medicine was the title of a paper by Dr. E. E. Allenbaugh. He showed that it was necessary for the country doctor to dispense, so his paper was confined to the city physician, in touch with the drug store. Dr. Allenbaugh thinks the physician should prepare his own medicine, as many times when a doctor gives a prescription to a patient this is given to someone else and is refilled many times, the doctor thereby losing his fee.

After the close of the business session the members and their wives went to the Hibbs parlors, where an elegant three-course banquet was served. Toasts followed by Dr. H. G. Weiss, on "Medical Society Organization;" Dr. Eva J. Buxton, on "Our Mistakes;" "Sunshine and Shadow," Dr. S. C. Lang; "The House Beautiful," Mrs. Dr. Haekelman, and "The Future Doctor," Dr. C. S. Baker. Dr. J. R. Lang was toastmaster for the occasion and did the honors well.

Adjourned.

H. Q. WHITE, Sec.

THIRD DISTRICT MEDICAL SOCIETY.

The Spring meeting of the Third District Medical Society was held at Mitchell April 30. The meeting was called to order in the Presbyterian Church by President McClain. In the absence of the secretary, Dr. Cohen, Dr. Riley Shrum, of Bedford, was appointed secretary pro tem. The address of welcome was delivered by Dr. W. H. Dings, of Mitchell.

Dr. Smith, of the Jeffersonville Reformatory, gave a résumé of the cause, course and treatment of eighty cases of typhoid fever occurring among the inmates of the reformatory during the Fall and Winter of 1908 and 1909. The source of contamination was found to be the water supply, which was being drawn from the Ohio river. The river during this period, was the lowest it had been for many years. Immediately upon installing private water supply the epidemic abated. Fortunately during this epidemic the death rate was maintained at the very low rate of 4 or 5 per cent. which was attributed to the results of discipline rather than any superior line of treatment.

Dr. J. D. Byrns, of Mitchell, read a splendid paper on the subject, "Placenta Praevia."

The Early Diagnosis of Cancer was the title of a paper by Dr. Jos. Rilus Eastman in which he said that cancer is on the increase, and that the cancerous period is now placed at old age or beyond middle life, but seems to be more common in younger members of society than was formerly thought to be the case. He emphasized the importance of great care and painstaking effort in endeavoring to arrive at early diagnosis, and offered a plea for early operation, also stating that only about 15 per cent. of cases of cancer which reach the surgeon in this country are operable, while in Germany from 50 to 60 per cent. of the cases are operable when the surgeon first gets them. This tends to demonstrate either our lax methods of diagnosis or, through deficient education of the public, our inability to bring the subjects of cancer to early operation, or both. Dr. Eastman advises against the late operations, as the death rate in such cases is very nearly 100 per cent. In the very early operation many cases will be saved, while the average of life, taking all such cases into consideration, will be greatly prolonged. In the late operations, with the death rate running close to 100 per cent., the record is certainly not very encouraging to the subjects of cancer, hence we should refuse to operate in the very late cases.

The election of officers resulted as follows: President, E. P. Easly, New Albany; vice-president, J. B. Duncan, Bedford; secretary-treasurer, J. B. Salb, Jasper.

Jasper, Dubois County, was selected as the next meeting place.

Adjourned.

RILEY SHRUM, Sec. Pro Tem.

FOURTH DISTRICT MEDICAL SOCIETY.

The Fourth District Medical Society held its annual session at Seymour, May 27. The society was called to order at 11 a. m. by President H. H. Sutton. The papers presented are as follows: "Which Shall It Be, U. S. P. and N. F. Preparations, or Proprietary Preparations?" Dr. Curtis Bland, Greensburg. Discussion by Drs. Robertson, Benham and Olnstead. "Food Fever in Children," Dr. J. H. Green, of North Vernon. Discussion by Drs. McCoy, Libbert and J. M. Wood. "Tuberculosis," Dr. F. H. Austin, of North Madison. Discussion by Drs. Essex, Osterman, Whittatch and

The program was followed by a luncheon, the following toasts being presented: "The Patient's Doctor," President W. L. Bryan, of Indiana University; "The Doctor's Wife," president of Daviess County Medical Society; "The Doctor's Children," president of Greene County Medical Society; "The Doctor's Patients," president of Knox County Medical Society; "The Doctor's Politics," president of Martin County Medical Society; "The Doctor's Religion," President of Owen County Medical Society; "The Doctor Himself," president of Sullivan County Medical Society.

Following the afternoon business session, the following papers were read: "The Physician as a Factor for Good and Evil," A. F. Knoefel, Linton; "Psychology and Psychotherapy," Prof. E. H. Lindley, Indiana University; "History of Medicine," Prof. Dennis E. Jackson, Indiana University.

Adjourned.

G. F. HOLLAND, Sec.

Whitsett. "The Importance of Early Diagnosis of Eye Troubles by the General Practitioner," Dr. Scott Culbertson, of Vevay. Discussion by Drs. Roope, Ritter and Copeland. "Medical Death with Surgical Debit," Dr. A. P. Roope, of Columbus. Discussion by Drs. Stemm, Denuy and Freemau. "Diagnosis and Treatment of Diseases of Kidneys," Dr. A. G. Osterman, of Seymour. Discussion by Drs. Williams and Ward. "Neurasthenia," by Dr. A. G. Osterman, of Seymour. Discussion by Drs. Mitchell, Boud and Bunker. "Causation and Prevention of the Acute Intestinal Diseases of Summer," Dr. O. S. Jaquith, of Lawrenceburg. Discussion by Drs. McAuliffe, Welch, Heller and Cummings. "A Case Report," Dr. Jno. Elfers, of Rising Sun.

The scientific session was followed by a banquet in the Masonic Temple, which was attended by 125 physicians and their wives. A very interesting program was given.

Adjourned.

J. M. SHIELDS, Sec.

BOOK REVIEWS

SURGERY, ITS PRINCIPLES AND PRACTICE. In five volumes. By sixty-six eminent surgeons. Edited by W. W. Keen, M.D., LL.D., Hon. F.R.C.S., Eng. and Edin., Emeritus Professor of the Principles of Surgery and of Clinical Surgery, Jefferson Medical College, Philadelphia. Volume 4. Octavo of 1194 pages, with 562 text illustrations and 9 colored plates. Philadelphia and London: W. B. Saunders Co., 1908. Per volume: Cloth, \$7.00 net; half morocco, \$8.00 net.

The surgery of the intestines, rectum, hernia, genito-urinary organs, eye, ear, military, naval and tropical surgery are the subjects treated in this volume, and there is also a special chapter and one of unusual interest, by Rodman, on the influence of race, sex and age in surgical affections. W. B. Coley, Robert Abbe, David L. Edsall, Joseph Ransohoff, Arthur Tracy, Cabot, Hugh H. Young, Orville Horwitz, Arthur Dean Bevan, John B. Murphy, Edward Bradford Dench, George E. de Schweinitz, General Robert M. O'Reilly, Surgeon General P. M. Rixey and Walter D. McCaw are the other contributors.

The surgery of the rectum and anus, and the surgery of the vermiform appendix are not given in the surgery of the intestines, but each is given a separate chapter. The typical Bassini operation will give slightly better results in oblique inguinal hernia in adults. The Mayo operation for umbilical hernia is regarded as the best and the author warns against any one undertaking the operation for the radical cure of large irreducible umbilical hernias unless he have large experience and well trained assistants. Ligation and excision is given first place among the operations

for hemorrhoids and the use of the plug is advised. The combined or abdominal method is regarded as preferable in cancer of the middle or upper rectum. The chapter on examination of the urine in relation to surgical measures is a very practical and interesting one. The best illustrated chapter in the book and one of the best all around is that by Ransohoff on the Surgery of the Kidney, Ureter and Suprarenal Gland. Exactly why stone in the bladder should be considered in a separate chapter and by a different author instead of being included in the chapter on the surgery of the bladder is not quite clear. This is not to be construed as an adverse criticism, however, for the chapter is good. Many surgeons, however, myself among the number, do not agree with the author when he says that "the crushing of the stone is the operation of choice whenever it is possible."

Young, of Baltimore, writes the Surgery of the Prostate and gives Fuller the credit of doing the first suprapubic prostatectomy and substantiates Fuller's assertion concerning Freyer's claim of priority. The Bottini operation in cancer of the prostate is spoken of as "surprisingly efficacious" in giving relief from pain and urinary obstruction. The surgery of the Penis and Urethra, and that of the Scrotum, Testicle, Spermatic Cord and Seminal Vesicles, are treated in separate chapters by different writers—Horwitz writing the former and Bevan the latter.

The chapter on Surgery of the Intestines, Omentum and Mesentery, but excluding the Surgery of the Appendix, Rectum and Anus, follows the chapters on the genito-urinary organs, and is jointly written by Van Hook and Kanaval. The surgery of the Appendix is given a separate chapter and is by Murphy. The Surgery of the Ear is written by Dench and the Surgery of the Eye by de Schweinitz. Military Surgery and Naval Surgery are treated in separate chapters by O'Reilly and Rixey respectively. These chapters, together with that on Tropical Surgery by McCaw, have an increased value to surgeons of this country since our adoption of the policy of expansion. Rodman's chapter on the Influence of Race, Sex and Age in Surgical Affections closes the volume.

A bibliographic list is appended to all the chapters except the last one and that by Cahot on Stone in the Bladder. These lists add to the value of the work in proportion as they approach completeness. Particularly to be commended along this line are the chapters on Surgery of the Bladder, Surgery of the Kidney, Ureter and Suprarenal Gland, and Surgery of the Intestines.

As above indicated it appears to the reviewer that a more systematic grouping of the subjects would have added to the value of the volume. Aside from this, however, there is very little in the volume that deserves adverse criticism and much that is worthy of praise. A fit companion to its worthy predecessors.

THE JOURNAL *OF THE* **INDIANA STATE MEDICAL ASSOCIATION**

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ORIGINAL ARTICLES

THE NATIONAL DEPARTMENT OF PUBLIC HEALTH FROM AN INDIANA VIEWPOINT.

CHARLES A. L. REED, M.D.
CINCINNATI.

[An address delivered under the auspices of the Indiana State Board of Health before the Annual Health Officers' Conference, Indianapolis, May 20, 1909.]

I have come to Indiana tonight to speak in behalf of a National Department of Public Health. It is my purpose to discuss the question largely from the Indiana standpoint. And here let me say that I know of no more wholesome standpoint from which to discuss this or any other progressive question than from the standpoint of this, my native state. In a long experience at Washington in an effort to promote this and allied legislation, much of which is now on the statute books, I have come to know that this question, in state and nation, has been largely promoted by the inestimable services of the man who presides over the health interests of this great commonwealth, Dr. J. N. Hurty. I happen to know, too, that at Washington the food of the people, the medicines they must take and their general physical welfare are being vigilantly safeguarded by that brilliant and level-headed statesman, the senior Senator from Indiana, the Honorable Albert J. Beveridge. Your junior Senator may be just as sound on these questions. I have as yet had no occasion to ascertain his views; but I do know that he cannot represent this constituency without standing for a department of health, including pure foods, pure drugs, and I came near saying pure liquors—but I understand that it is unsafe just now to get that subject started at

any public meeting in Indiana, if one wishes to discuss anything else.

I do wish to discuss something else, and first and foremost I wish to discuss briefly certain general features of the present great public health movement which received a splendid impetus from Governor Marshall in his remarks this morning.

PRESIDENT TAFT IN LINE.

In the first place the agitation long conducted by the American Medical Association and by other bodies of the organized medical profession is at last bearing tangible fruit in influential coöperation on the part of the laity.

About two years ago a national public health defense league was organized in New York. A little later a movement originating in the American Association for the Advancement of Science resulted in the organization of an influential body known as the Committee of One Hundred. These two movements have since joined forces and, together with the American Medical Association, are keeping the question before the public and before Congress. One of the practical results of their efforts was the adoption of a plank in the Ohio Republican platform of last year declaring in favor of "the organization of all existing national public health agencies into a single national public health department." The same declaration, in effect, was made later in the platforms of both parties in various states, and by declarations of similar purport in the national platforms of both the Republican and Democratic parties. And, now that the election is over, I am happy to be able to assure you that the movement to secure desired national public health legislation along rational and constitutional lines is today receiving and will continue to receive the loyal support of President Taft.

A CAMPAIGN FOR THE GENERAL WELFARE.

It now devolves, not only on the people themselves, but on the nearly 140,000 physicians of this country, as the natural custodians of the public health, collectively and severally, to bring the most active influence to bear, not only in seconding this salutary move on the part of the President, when once he shall take the step, but to anticipate that action by a prompt, active and persistent campaign in behalf of this fundamental measure for the public welfare.

The lines on which this campaign ought to be conducted vary in different localities, but there are certain general features that ought not to be ignored in any locality. These features are suggested, in part at least, by the failure to pass the various measures that have heretofore been submitted to Congress. Here let me digress far enough to say that these failures are to be construed only as valuable and, for that matter, successful, educational efforts in the general evolution of the desired legislation. Nearly every law that today stands the test of the courts is able to do so because it has had to stand the test of more or less prolonged opposition in Congress.

Mr. Sherman framed not less than six anti-trust measures, all of which were successfully defeated, before he finally fashioned the great law that today bears his name and that for eighteen years has stood the test of every judicial tribunal in the land. But, able statesman that he was, he both learned from and taught by each successive effort, and so, I trust, have we learned from and taught by the experience that has befallen us in this great effort to furnish something like adequate protection to the greatest natural resources of this country—the health, lives and productive energy of the people themselves.

SOME CAUSES OF TARDY ACTION.

And now, prompted by this spirit, we can, I think, discover several of the causes of failure actually to pass the measures heretofore submitted to Congress. In the first place, our attempts at actual legislation were premature in the sense that they preceded the actual education of the people and the consequent development of public sentiment on the subject. In the next place, it is now apparent that previous proposals have been too radical and have too generally been framed in contravention of the fact that most legislation must be built on previous legislation and is, therefore, essentially evolutionary in character. And in the third place, it is now very evident that the failure of the medical profession sooner to procure this legislation

in behalf of the people is attributable in no small measure to the dearth of representatives of that profession in the legislative halls of the people. We may, with advantage, examine these several reasons somewhat in detail.

A POPULAR PROPAGANDA.

The dissemination by the medical profession of knowledge with respect to public health problems has not been as widespread or as effective as either our opportunities or the character of the subject would warrant. Much, indeed, has been done, and the present information of the people is almost entirely the result of the altruistic initiative of the physicians of this country. But too much of the work has been done in, and confined to, the medical societies and too much of the publicity has been done through and confined to the medical press.

This has too generally amounted to a mere carrying of coals from Newcastle to Newcastle and back again to Newcastle. What is demanded by the times is that proceedings such as these here this evening, and such as an international tuberculosis congress and such as the county medical society, whenever relating to general welfare subjects, shall be heralded through the popular prints until they carry their lesson to every home and fireside in the land. Carry the message to the people! This should be the motto of the campaign.

THE MESSAGE TO THE PEOPLE.

But what shall be the message? In the first place let us tell the people some things that have been done, that they may judge for themselves, and, judging, hope for and help secure other things that can be done. In doing so it is not necessary to go so far back as Jenner and the discovery of vaccination and to tell them of the beneficent results of that first great achievement in preventive medicine. Nor is it essential that we should recount the great revelations of Pasteur that gave him that immortality which consists in a perpetual abiding place in the grateful memory of man. Nor need we speak of Lister. These are oft-told tales that have come to tax the interest of the hearer. But we can tell them of some things of today. We can tell them of Finlay, and Reed, and Lazear, and Carroll, and how, from their martyrdom, it comes that the argosies of commerce can today sail the seas without flying the yellow flag of pestilence. Tell them this; tell them the humanity of it all.

But if that does not appeal to them, translate it into terms of dollars and cents and show

them how "profitable" has been the "investment." Compute the commercial disaster contingent on a single visitation of yellow fever to our southern seaboard. And then tell them how the recent attempted invasion of this country by that dreadful disease was repelled and defeated through the efficiency of the service under Wyman. But, above all, tell them how the zone of pestilence at the Isthmus of Panama has been made the habitation of health that the waters of the two great oceans may be joined, all made possible by the great genius of Gorgas. Tell them that, right now, health and life are being made secure on our mainland and commerce itself, domestic and foreign, is being protected by a valiant guard stationed at our seaports—stationed, for instance, right in New York—sifting out and thrusting back the disease that comes in the guise of the immigrant, and at San Francisco, where the triumphant battle against the bubonic plague has added new laurels to our country, and especially to our Public Health and Marine-Hospital Service. Tell them of our food and drug laws, and of our supervision of cattle intended for food supply. Tell them of the sanitary work that is being done right at their doors, work that makes their homes habitable. Then tell them that if these things are being done other things that ought to be done can be done.

THE GREAT WHITE PLAGUE.

What, then, are some of the things that are not done but that ought to be and could be done with a properly constituted national health administration? The broad answer to this question is that preventable diseases could be still further prevented to the almost incalculable benefit of the people. And this, too, must be a part of the message to the people. Let us point to tuberculosis, in the campaign to combat which the scientists of the world were last year in congress at the capital of our country. This is a preventable disease, yet, as I pointed out at that congress, this disease, according to the statement of experts, kills 160,000 people and keeps in invalidism nearly 700,000 more people in this country every year.

This is a veritable warfare in which the American people, arrayed on one side, are today offering resistance to an army of invasion—the army of the bacilli—already encamped in our midst, in our very homes, a host more numerous than all the men in all the armies and all the natives of all the countries of all the world in all the ages. And each individual in that host is capable, under favoring conditions, of destroying a

human life. As a matter of fact, the human lives thus sacrificed each year in this country are equivalent to the enlisted men of both our army and navy. What if these two arms of our service were wiped out of existence in a single year by a foreign foe? Do you not suppose that every resource of our country would be taxed to repel the invader, to destroy the decimating minions of death? Or suppose that first Indianapolis, then Kansas City, then St. Paul were as suddenly wiped off the map. Would not the people's representatives in Congress vote, if necessary, the last dollar in the treasury to avert such a menace from still other cities?

POLLUTION OF INDIANA STREAMS.

A couple of years ago, when speaking on this subject in New York City, I had occasion to summarize conditions in the Ohio valley as "a thousand miles of river and a thousand miles of typhoid." I believe the phrase has since become something of a slogan. At any rate, the people seem to have become aroused and as a result an interstate commission is today in session in Wheeling, W. Va., to devise ways and means for the purification of the Ohio River. I was rather interested when I read in the newspapers that Indiana is too busy at home cleaning up her domestic streams. I do not know what justification there may be for this statement, but I do know that the streams of Indiana can not be worse than the streams of other states west of the Alleghenies.

SOME UNPALATABLE FACTS FOR INDIANA.

Now what are some of the facts? In the first place let it be remembered that there is not a county from the headwaters of the Allegheny and Monongahela Rivers to the confluence of the Ohio with the Mississippi at Cairo that is not annually infested with more or less typhoid fever. This is emphatically true of the towns which derive their domestic water supply from the Ohio River—towns like Portsmouth, Ohio, where, so we are informed by the United States government, typhoid fever is always present. Now, typhoid fever is a diarrheal disease and is communicated from one person to another by discharges from patients. Pittsburgh and Allegheny City throw about 14,000,000 such discharges into the Ohio River every year, to be consumed in drinking water by the people further down stream. And the people further down stream do the same thing for people still further down stream. And that is how the question comes to be one of practical interest to the people of Indiana. There are danger and disease in all cities

that rely on any river that is used as a sewer by the people who live along its banks. The same principle applies to the inland rivers of this state, all of which are, I fancy, used as sewers for their bordering towns. If it were not for the fact that running streams have a limited—but only a limited—power of self-purification they would breed not merely disease, but decimation. A dangerous reliance has been placed on this alleged power of self-purification of streams. Let it be remembered that a typhoid germ that is put into the Ohio River at Pittsburg may give the disease to a susceptible person who may drink that germ at Evansville.

AN ILLUSTRATIVE INCIDENT.

At Cincinnati typhoid fever was once almost constantly prevalent to the degree of being epidemic. The Cincinnati Hospital alone carried an average of about 80 cases. We spent something like a dozen millions of dollars to filter the human excrement out of the water that we were drinking. Within a few weeks after this superb plant—probably the finest in America—went into operation the typhoid fever admissions in the Cincinnati Hospital fell from something like 80 a month to 5 a month. Practically every one of the few cases that we now have are traceable to out-of-town origin.

A MENACE TO INDIANA TOWNS.

But the discharges from cases that we do have go with all the rest of our sewage, from something like a half million of people, into the Ohio River for prompt consumption by Lawrenceburg, Aurora, Madison, Jeffersonville, Evansville, to say nothing of Louisville. If I were the Health Officer of Indiana it seems to me that if I could not accomplish the purpose by any other means I would enjoin the cities of Cincinnati, Covington and Newport in particular from discharging their crude sewage into the Ohio River. The Health Officer of each state should in turn protect his people from similar contamination upstream.

PRESENT SEWAGE DISPOSAL CRUDE AND WASTEFUL.

Even if there were no specific legislation on this subject, action ought to lie under the common law in these cases. Such a position is now tenable not only because the people in this state are entitled to protection against this death-dealing nastiness but because the present method of sewage disposal is primitive and crude and unnecessarily wasteful, as it is disgusting and dangerous. The need for a strong federal control through the national department of public health

over interstate streams finds an additional reason in the enforcement of the sanitary principles that I have just outlined.

THE ALARMING INCREASE OF CANCER.

I am not an alarmist, but I can not shut my eyes to facts that are forced upon me in my daily experience. That experience teaches me that cancer is increasing in this country literally by leaps and bounds. At no time has tuberculosis increased as rapidly as cancer is today increasing. Tuberculosis now causes more deaths than any other one disease. Cancer is now second on the list—second only to tuberculosis. In less than ten years, if present tendencies are permitted to continue, the present positions of these two diseases in the death-dealing category will be reversed. Now what are some of the facts about this, the most cruel, merciless and resistless disease that affects mankind?

Over 60,000 people died from this malady alone in this country last year. There were twice as many more people who were afflicted with the disease, most of whom will die this year. This is equivalent to saying that all the people in either Fort Wayne or Evansville died of cancer last year, and that all the people in twenty other country towns of Indiana of 6,000 inhabitants each are doomed with the same disease. If these national conditions were thus concentrated here in Indiana and their significance thus reduced to a concrete demonstration, do you not think something would be done about it? Do you not think the "general welfare" clause of the Constitution or some other clause of the Constitution would be so construed that the national government would condescend at least to establish a laboratory for the scientific investigation of the disease? The German government established such investigations with respect to tuberculosis—and solved the mystery of the disease. That is how we happen to be working along intelligent lines and to a definite purpose in the great anti-tuberculosis fight today. Yet our own Congress, which literally spends hundreds of thousands of dollars annually for the protection of swine, has failed even seriously to consider a proposition to establish a national department of health which would naturally deal with this great and oppressive problem for the protection of human beings.

But I started to speak about the rapid increase of this disease. What are some of the figures? Here are a few that indicate the increasing mortality estimated on a basis of each 100,000 population in the various localities. In all cities that have furnished figures the average increase

was from 72 to 80 per 100,000 of people during the last four years. There has been less increase in the country districts. In some states, cities and country included, the increase has been startling. Thus in Maine the figures are 85 and 101; Massachusetts, 80 and 93; Rhode Island, 77 and 91, and New Hampshire, 77 and 96. Certain cities are even more startling. Thus in New Haven there has been a jump in four years from 79 to 100, in Boston from 93 to 104, in Kansas City from 55 to 82, in Omaha from 47 to 84, in Providence from 81 to 109, in Cincinnati 83 to 89. These figures and many others, given on the authority of our National Bureau of Vital Statistics, are the danger signals that tell of the menace that hangs over our country, a menace in the presence of which the people, and especially the government that is responsible to the people, may well pause and become thoughtful.

SOME ASTONISHING FIGURES.

Now what does all this mean? I do not speak of the pain, the sorrow, the humanity, or, rather, the inhumanity, of it all. There are those who have feelings, are capable of sorrow, and who realize the awful significance of the fact that preventable, emphatically preventable, diseases, in the aggregate, kill an average of one person every two minutes. But I now appeal to the larger number, who, I grieve to say, think only in terms of dollars and cents. So let us translate consumption and typhoid, malaria and pneumonia, cancer and plague into their equivalents, into the coin of the realm. But let us begin with a few primary postulates.

In the first place the most valuable natural resources of this country, fields, forests and mines, not excepted, is the productive energy of the people. In computing the worth of this resource a human life, rather than an acre, a lode or a tree, must be the basis of reckoning. What is it worth? Let us see.

A man's life is his capital. What he earns is the interest on his capital. Then suppose that a man works 300 days in a year at \$1.25 a day, and that this money thus earned, \$375 a year, represents 5 per cent. on his capital, which, on that basis, would amount to \$7,500. Then multiply this by 160,000 for tuberculosis and 30,000 for typhoid, and so on through the list, which foots up at about a quarter of a million, then add it all together, and you will only have begun. You are to add to this the loss of productive energy of something like 700,000 people constantly ill for a whole year from tuberculosis and nearly half that number ill for sixty days from typhoid, and so on through the list, at \$1.25 a

day for each one. Then, ignoring the fact that the lives of many are worth thousands and hundreds of thousands of dollars a year, exclude the non-producers—women, children and dependents—by dividing the result by two. Then, still to be on the safe side, divide the result again by two, and the remaining figure, if translated into the coin of the realm and placed in our national treasury, would not only pay for a properly equipped national department of public health, but would, in addition, pay the current expenses of the army and navy, duplicate our armament on the seas, fortify our coasts, deepen our internal waterways, and in ten years would pay for the Panama Canal and wipe out our national debt.

Put this in the message to the people.

EXISTING PUBLIC HEALTH AGENCIES.

Of course, such a consummation in all its completeness is entirely beyond hope of realization. The figures are presented only to reduce to approximate concrete terms the enormity of present conditions—conditions which we know could be largely bettered through proper governmental agencies. Let it not be assumed that we are today entirely without such agencies—agencies that have been and are today doing excellent work.

But they are inadequate and, considered as a whole, scattered and unorganized and to that degree and in consequence of that fact are inefficient. The Public Health and Marine-Hospital Service is under the Treasury Department, and, absurd as it may seem, the Secretary of the Treasury is the chief health officer of the United States. The Bureau of Vital Statistics is under the Department of Commerce and Labor. The Bureau of Chemistry, charged with the enforcement of the National Food and Drugs Act, and the Bureau of Animal Industry, charged with protecting the people against diseased meats, are under the Department of Agriculture. The national eleemosynary institutions, all of them public health agencies, are in the so-called Department of the Interior. Of course, the health of the army and navy is looked after by services organized within these respective departments.

There is today no service especially organized to fight the plague of tuberculosis. No governmental agency is entrusted with the sanitation of interstate streams and the consequent protection of the people from typhoid due to these media of communication. There are no national laboratories for the solution of the yet hidden mysteries of contagion and infection, and especially of cancer. Other specific activities, such, for

instance, as a campaign against disease-carrying insects, are not provided for, while the scattered agencies that we do possess are given such an unfortunate status in our scheme of government as to compromise their educational value and practically to deprive them of moral force.

Put these facts, all of them, in the message to the people.

THE PRESENT DUTY OF THE NATIONAL GOVERNMENT.

But what shall be done by the national government? I am not authorized to speak for the proposals which the President now has in contemplation. I do not feel that I am anticipating them in the least when I say that there ought to be but little absolutely new legislation undertaken as an initial step. The first thing that ought to be done is to assemble all existing public health agencies and coordinate them under a single head, leaving each agency to continue its activities under existing laws, supplementary laws to be enacted, as they are afterward indicated. Then I insist that the government owes it to the people to give this great movement such dignified status in the scheme of government as will make its moral and educational force felt in every hamlet in the land.

And let this be the message to the people.

THE PHYSICIAN AND HIS AVOCATION.*

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Mr. Toastmaster.—The subject assigned me is the best one on the list, because it is the one to which least consideration has been given. Our medical colleges and societies have covered, more or less completely, the actual medical sciences and all other subjects allied to them. But only here and there, haphazard, is ever any attention paid to the doctor's avocation, which I interpret to mean his recreation. At least nine out of every ten doctors sitting here this evening need seriously to readjust themselves along the lines that I shall only have time to suggest. In one of Renan's critical essays you find this sentence: "The most dangerous error in the matter of social morality is the systematic suppression of pleasure."

For us this may be wisely paraphrased to read: "The most dangerous error in the doctor's life is the systematic suppression of all interests outside of medicine."

"All work and no play makes Jack a dull boy." Oliver Herford deliberately misquoted this in saying "All work and no play makes Jack a dill pickle." We recognize the force of the old saw as applying to school children. They must have recess time. In the lower grades they sing a song or go through some form of calisthenics, or simply march about the room, and these prophylactic measures have practically caused to disappear that old school disease that our grandfathers would have called the "fidgets." As the grades advance the method varies, but always with the idea of a change in the attention.

Mosso, a well known Italian scientist, in his work on "Fatigue" repeatedly calls attention to the inability of various motor and sensory structures to sustain evenly prolonged effort. The curve of muscle contraction falls lower and lower. The paths of the neurones carry sense and motor impulses more and more slowly. The ciliary muscles of the eye often develop the spasm of accommodation and can only be restored to normal by rest. The sense of smell is only acute with the first impressions, after which perception may entirely die away and only be restored after entire removal of the odorous substance. Taste is keen and definite only with the first few taste impressions. This is recognized by the professional wine and tea tasters, who can only practice their vocations for short periods of time relieved by long intervals of abstinence.

All down the line of experience these observations hold and there is no conflict of opinion or authority. There never was a man so great in some chosen field, a greatness achieved by concentration of attention and intense application, but might have been greater by a proper recreation. It is physiologically and logically wrong for any individual to stick to his task until it becomes a grind.

Take almost any middle aged factory hand doing inexpert labor. He has become a machine himself—prematurely old, with whatever enthusiasm and imagination he may naturally have been endowed with long since dead—his only real interest the daily necessities and the pot of beer on Saturday night. With peculiar emphasis it may be urged that every doctor should have an avocation, preferably something not even allied to medicine, some interest that calls into play new groups of brain cells, new muscle movements and new responses from all the senses. It would be folly to prescribe an avocation. No two would agree, and this delightful variety is the best part of it. Let each develop his own.

* A toast delivered at the Alumni Banquet of the University School of Medicine, June 24, 1909.

One may become a horticulturalist and possibly specialize in rose culture or shrubbery. A lawyer here in Indianapolis has a well equipped carpenter shop and builds furniture—chairs, tables, davenports, picture frames—and actually turns out more beautiful pieces than most of the factories. Many professional men own a farm, and it really becomes their playground. These are they whom Bill Nye stigmatized as "silk night-shirt farmers." He told of one of them who delivered an address before a farmers' institute on "The Inhumanity of Dehorning Hydraulie Rams." Become a photographer, a fisherman, or an entomologist. It is that each man shall have some palpitating, keen, live interest in something outside himself and his own immediate affairs, the direction it takes being of little concern.

Among notable foreign physicians who have attained distinction outside their profession may be mentioned Billroth, probably the greatest surgeon of his generation. As a musical critic he became an authority, publishing many volumes that stand as most valuable contributions. The German schools of music accord to him their recognition as a master. Volkmann, whose name as a surgeon carries to every land, wrote many short philosophical sketches. He was, moreover, the author of many fairy tales that are among the most charming in the German language. Hoffmann, the anatomist, was also a writer of popular tales. His "Slovenly Peter" is the "Mother Goose" of all German children, and has contributed largely to their folk songs. Haab, the ophthalmologist, a distinguished invited guest at one of the recent meetings of the American Medical Association, is regarded as one of the most original of contemporary painters. His canvases are to be found in many of the foreign galleries. Eschmarch was an art lover and widely recognized critic. Goethe, Schiller, Conan Doyle—these men were all physicians. Treves, the English anatomist and surgeon, preserved the traditions of England in being an enthusiastic and skillful navigator. He took part in many important yacht races, often sailing his own boat to victory when pitted against the expert seamanship of the world.

In our own country Oliver Wendell Holmes as professor of anatomy in Harvard was first to point out the causative relation of erysipelas to puerperal fever. To later generations he is known almost entirely by his literary work. "Elsie Venner," "The Autoerat," "The Professor," and much delightful poetry are on every book shelf.

No greater man has in the last generation studied the science and practised the art of medicine than Weir Mitchell. It is fair to say that he is so great because he knew how to rest himself in other activities. He knew how to amuse himself with Hugh Wynne, and "The Autobiography of a Quaek" and the many equally charming characters of his novels.

William Pepper was in love with his city of Philadelphia, and throughout a life of manifold interests particularly absorbed himself in the promotion of all sorts of civic improvements. It is said that by his own unaided efforts he raised over \$4,000,000 that were devoted to such public enterprises as the Bourse, the University of Pennsylvania, public parks, art collections, etc. McBurney of New York prides himself on his ability to pitch hay, and the harvesting time of each year sees him in the hayfields of northern New York setting the pace for the field hands. Prudden is at home in archeology. He has tramped over most of Arizona and New Mexico making his own excavations and a more complete private collection than his may not be found in New York City.

MaeKenzie, distinguished among Canadian physicians before he became professor of physical education in the University of Pennsylvania, is recognized as one of the very few great sculptors that America has produced. No collection of American art is regarded as complete without numbering in its catalogue some of his marbles or bronzes. J. William White of Philadelphia was for years one of the best amateur boxers in America.

We have all known many men hopelessly deep in the rut of medicine, men whose minds have long since ceased to awaken to interest in anything outside the routine of their daily occupation. The corollary of this is that their minds respond more and more slowly and with less and less of virile interest even to the demands of work, and in the end they are poorer doctors and poorer men.

The physician should be able to meet his patient with some common interest. He should touch him first as a man. There should be some sympathy in their relations, and, given such sympathy, the touch of the physician will naturally find its way. You must have outside interest. It will make you more effective. It will make you happier. Try a few rounds of golf. Doggedly but joyously tramp over the grassy fields, "swatting the pill" into more remote territory in order that you may hunt it up and swat it again. The game will call out all the knack and skill that you may possess and something besides.

Become a collector of colonial furniture or old books. Turn to physical astronomy and come to know the constellations and the wonderfully beautiful mythology that the ancient shepherds weaved about it.

The essential thing is to conscientiously, religiously, heroically nurture some interest aside from your occupation. If you forever pound at your brain centers with the one impression, bye and bye they will weary and flag, and to seek an avocation then may be too late.

ACUTE AND CHRONIC GONORRHEAS TREATED WITH GONOCOCCIC VAC- CINE AS AN ADJUNCT TO ROUTINE TREATMENT.

REPORT OF CLINICAL OBSERVATIONS IN TWENTY
CASES.

FRANK S. CROCKETT, M.D.
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During the winter of 1907-08 I took occasion to use Mulford's gonococcic vaccine in two cases of orcho-epididymitis. I failed to notice any appreciable result, but this may have been due to my timidity or to my fear in using large enough doses or that I was too easily discouraged and did not use the vaccine long enough to give it a fair trial. At least I discontinued its use and waited for further developments.

Prof. Severance Burrage, of Purdue University, who has been supplying the local profession with vaccines during the past year, offered me sufficient gonococcic vaccine to run a series of tests in acute and chronic cases of gonorrhea. The vaccine was obtained about September 25 and was used on such cases as did not seem to respond properly to irrigations.

With very few exceptions, all injections were given in the groin on alternate sides. Patients complained of little or no pain at the site of injections, and only in two or three cases did the patient develop any symptoms worthy of attention during the day or two following injections. After the first injection was given and recovered from I do not recall a single case where a patient developed reactionary symptoms after subsequent treatments, excepting where on a late recurrence, the injections being again given, the patient was found to present much the same condition that attended the primary treatment.

Irrigations were employed in all of these cases as a routine treatment, which may lead some critics to believe that equal results might have been obtained without the vaccine. However,

this series of cases is presented merely as a recitation of clinical observations of gonorrhreal activity following injections of varying strength of gonococcic vaccine. Doses were repeated when the patient's condition seemed to permit of it, and my general impression from my experience leads me to advocate frequent doses ranging from 50,000,000 to 250,000,000 dead gonococci in suspension.

CASE 1.—Merchant, married. History of several gonorrhreas years before. Came with an acute gonorrhea June 4, second day after discharge appeared. Microscope showed gonococci in groups. Routine treatment consisted of irrigations. Patient came very irregularly; would come for a week or ten days at a time; then, when all visible signs had disappeared, would not return till a recurrence drove him back. He returned September 26. Slight recurrence and discharge. By the two-glass method the first urine passed was found to be slightly cloudy, the second clear. Irrigations continued and bacteria, 50,000,000, were injected.

September 29 suffered a moderate depression day following last injection. Bacteria 100,000,000. October 3 changed from permanganate to instillations of silver. Bacteria 150,000,000.

Continued six subsequent treatments and discharged as cured after appropriate tests made to prove cure.

The use of vaccine in this case was followed with comparatively good results, although the irregularity of the patient's treatment with irrigations prevented the best possible results that might have been obtained from a well-regulated supporting treatment. This case is added to the list merely for the sake of cumulative evidence.

CASE 2.—October 13. Student, single, acute gonorrhea, first case, second day after discharge appeared. Ten days postcoitus. Microscope showed many gonococci in groups. Treated without much sustained improvement till the 25th.

October 25: Urine, I slightly cloudy, II clear. Bacteria, 100,000,000.

October 26: No depression. Urine I slightly cloudy, II clear.

October 28: Urine I slightly cloudy, II clear. Bacteria 500,000,000. In the evening of this day the urine was turbid, but it cleared up until only very slightly cloudy on the 30th.

October 31: Urine I cloudy, II cloudy. Bacteria 500,000,000.

November 5: Returned from trip home to vote. Urine I cloudy, II slightly cloudy. Bacteria 500,000,000.

November 6: Urine I very slightly cloudy, II almost clear. Continued this way until the 9th.

November 9: Urine I very slightly cloudy, II clear. Bacteria 250,000,000.

November 10: Urine I cloudy, II cloudy.

November 12: Urine I slightly cloudy, II slightly cloudy. Bacteria 300,000,000.

November 16: Urine I clear. Bacteria 300,000,000.

November 17: Urine I very slightly cloudy, II almost clear.

November 19: Urine I clear. Bacteria 500,000,000. Urine remained clear until he left for home shortly after without proof of cure.

In this case the vaccine was given in large doses early in the treatment and was well borne. The dose was cut in half under the belief that the dose was too large, but the patient did not seem to do so well until the dose was increased to the previous size. Unfortunately the patient was not under my control long enough to enable one to make proper conclusions.

CASE 3.—September 11. Clerk, first gonorrhea, six days posteitus, second day after appearance of discharge. Microscope showed many gonococci in groups. Routine treatment consisted of irrigations. The amount of pus in the urine varied from slightly cloudy to almost clear and had invaded the posterior urethra by the 26th.

September 26: Urine I cloudy, II not obtained. Bacteria 50,000,000.

September 27: Felt very depressed. Urine I cloudy, II not obtained.

September 28: Felt slightly depressed. Urine I slightly cloudy.

September 30: Urine I slightly cloudy. Bacteria 100,000,000.

October 1: Urine I almost clear, II almost clear.

October 2: Urine I clear. Urine remained perfect until finally dismissed as cured after appropriate tests.

In this case the patient was doing well on irrigations alone, but was given the vaccine to demonstrate its efficiency. The patient was of rather a dejected habit, so that his depression was perhaps unusually severe and prolonged. The first injection of vaccine was followed by the patient becoming worse the following day and only small improvement by the time the second injection was given. However, the doubling of the second injection was followed with the happy result of a speedy disappearance of the gonorrhreal activity.

CASE 4.—June 22. Electrician, married, third gonorrhea, second day of discharge. Microscope showed many gonococci in groups. Treatment consisted of irrigations and massage with a few dilations during September. Was never quite able to complete cure or prevent recurrences.

September 25: Urine I cloudy, II clear. Bacteria 100,000,000.

September 26: Urine clear. Felt very depressed.

September 28: Urine I slightly cloudy, II clear. Bacteria 200,000,000.

September 29: Urine I clear. No depression.

October 24: Patient returned with recurrence. Urine I cloudy, irrigated.

October 26: Urine I cloudy, II not obtained. Bacteria 500,000,000.

October 27: Urine I very slightly cloudy, II very slightly cloudy.

October 30: Urine I cloudy, II clear. Bacteria 500,000,000.

October 31: Urine I clear.

November 3: Urine I clear. Bacteria 500,000,000.

November 9: Urine still clear. Bacteria 500,000,000.

November 21: Urine I clear, commenced tests.

December 12: Dismissed as cured.

In this case there was some hidden focus of infection that defied my best efforts to find and dislodge with the aid of the urethroscope or digital examination of the prostate, Cowper's glands or the vesicals per rectum. Here the initial dose seems to have been too large, as it was followed by marked depression and slight fever. However, the effect upon the course of the disease was distinct and favorable. Injections of vaccine were discontinued as soon as the disease disappeared, because I wanted to observe results. It will be noticed, however, that as soon as injections were resumed on account of the recurrence they were continued for some time after all visible evidences of the disease had disappeared. I felt that I would be taking chances to stop sooner in this case. Patients soon acquire a wonderful tolerance for vaccine.

CASE 5.—August 25. Bartender, single, first case, third week. Had been treating with another physician. Discharge heavy. Urine I cloudy, painful. Treatment consisted of irrigations daily.

September 10: Urine I clear. Patient, believing himself well, discontinued treatment until he returned with a recurrence and pain in the right testicle. Patient insisted on working.

September 29: Urine I clear. Bacteria 150,000,000.

September 30: Felt better generally, no depression.

October 3: Bacteria 150,000,000.

October 5: Patient put to bed. Bacteria 150,000,000.

October 9: Out of bed. Urine I clear.

October 16: Slight recurrence. Irrigated.

November 6: Tests.

November 24: Dismissed as cured.

This case is quoted to show the results of the vaccine in oreho-epididymitis. Patient was kept so that he worked in comfort for about a week after complication appeared until it was necessary to put him to bed. Then he was able to be

out in four days as compared to a week or two weeks, as has been my experience without the vaccine. In three complications of this nature that I have treated with the vaccine I have not had one of them suffer from a reappearance of the discharge and pus in the urine, as is usually the case without it. This, however, is probably only a coincident.

CASE 6.—April 6. Mechanic, single, chronic gonorrhea, six months' standing. Referred by Dr. Walker, of this city. Cured of all active gonorrhreal symptoms by irrigations, massage of the prostate, urethral dilatations and instillations of silver. Patient continued to complain of irritation at the bladder neck and frequent nocturnal emissions. As these symptoms stubbornly refused to respond to the usual measures, I put him on the vaccine, in the hope that it might serve the purpose.

October 15: Patient complained of persistent rheumatic pains in the muscles of his legs and a general feeling of malaise. Bacteria 100,000,000 as initial dose.

October 19: Patient suffered from deep depression that laid him off from work on day following injection. Had recovered.

October 23: Bacteria 250,000,000.

October 26: All rheumatic pains gone, feels fine. Bacteria 500,000,000.

October 31: Baeteria 500,000,000.

November 3: Bacteria 500,000,000.

This patient was a mild neurasthenic and it might be possible that the novelty of the treatment had as much to do with the cure as the vaccine, may be more.

CASE 7.—November 8. Musician, single, acute clap, second case, second day. Syphilitic in second year of treatment. Routine treatment—irrigations. Urine I slightly cloudy, II clear.

November 10: Urine I slightly cloudy, II clear. Baeteria 66,000,000.

November 11: Urine I almost clear.

November 12: Urine I clear.

November 13: Urine I almost clear.

November 14: Urine I slightly cloudy. Bacteria 100,000,000.

November 15: Urine I slightly cloudy.

November 16: Urine I cloudy. Bacteria 100,000,000.

November 17 and 18: Urine I slightly cloudy.

November 19, 20 and 21: Urine I almost clear. Bacteria 150,000,000.

November 22: Urine I clear.

November 24: Urine I clear.

December 20: Patient dismissed after tests, cured.

CASE 8.—November 4. Merchant of Colfax, Ind., single, chronic gonorrhea, first case, sixteen months' standing. Was apparently cured after first six months treated, so he reported,

but that the discharge had returned some time in September, six weeks after any possible exposure. His ease was complicated with a orcho-epididymitis two days old. He was given an initial dose of bacteria, 200,000,000, and put to bed at a nearby hotel.

November 5: Felt very much depressed. Fever 104.

November 6: Moved to Home Hospital. Fever 104. Hot-water bag to testicle.

November 8: Bacteria 100,000,000. Temperature normal.

November 11: Patient reported at the office. Testicle normal to the touch, except small hard knot, due to congestion of epididymis. Bacteria 200,000,000. Patient returned home.

November 13: Urine I clear. Bacteria 250,000,000.

November 17: Urine I clear and remained clear. Patient was finished off with massage of the prostate and tests to prove cure.

The result in this case fully warrants the use of the vaccine if one case is sufficient to warrant anything. I rather think that the initial dose in this case was too large and caused the sudden increase of temperature. However, the vaccine seems in my hands to be perfectly harmless, so that I do not feel that the patient was subjected to any unnecessary risk. At least he had the advantage of getting out of bed much sooner than the average case.

CASE 9.—October 21. Grocer, single, first gonorrhea, referred from Colfax, Ind. Case was of eleven weeks' duration and seemed to have been chronic from the first. Complicated with an orcho-epididymitis of two weeks' standing, becoming very painful just prior to the visit. Testicle swollen about twice normal size. Treatment consisted of hot therapeutic lamp and bacteria, 100,000,000. Patient put to bed, except for meals and calls at the office.

October 23: Bacteria 250,000,000.

October 24: Felt much better generally.

October 25: Testicle softer, less pain. Bacteria 500,000,000.

October 26: Testicle completely soft, no pain.

October 30: Testicle normal.

November 2: Urine has been clear entire time under treatment. Baeteria 500,000,000.

November 19: Urine I slightly cloudy. Bacteria 500,000,000. Patient concluded treatment after prostatic massage and tests, cured.

This patient exhibited a wonderful and unusual ability to take large injections of vaccine without the slightest depressing effect.

CASE 10.—September 4. Contractor, married, second gonorrhea, had used rubber condom and washed thoroughly. Microscope showed many gonococci in well-defined groups. Evidently infected himself by carrying germs to the meatus

while washing. Routine treatment consisted of irrigations. Urine remained slightly cloudy until the 28th, when patient complained of heavy feeling in the perineum. Examination per rectum showed that the prostate was acutely inflamed and enlarged. Experience in a previous case had developed the fact that the patient could not stand hot rectal injections. So the perineum was cupped and bacteria (Mulford), 50,000,000, were injected September 8.

September 9: Urine I turbid, II slightly cloudy. Bacteria 100,000,000 (Mulford).

September 10: Urine I cloudy, II slightly cloudy, slight fever.

September 11: Urine I slightly cloudy, II clear.

September 12: Urine I turbid, II turbid. Bacteria (Mulford) 100,000,000.

September 13: Urine I turbid, II slightly cloudy.

September 14: Urine I cloudy, II slightly cloudy.

September 16: Urine I cloudy, II slightly cloudy.

September 17: Urine I slightly cloudy, II slightly cloudy.

September 19: Urine I almost clear, II almost clear.

September 21: Urine I clear. Urine remained clear until October 5, when he returned after a test with a recurrence. Irrigations and prostatic massage were employed until October 23, when patient was put off treatment; observe effect of rest.

November 2: Slight recurrence. Urine I almost clear. Bacteria (Professor Burrage) 200,000,000.

November 3 and 4: Urine I clear.

November 5: Urine I almost clear. Bacteria 250,000,000.

November 6: Urine I almost clear. Felt depressed.

November 9: Urine I clear. Bacteria 200,000,000.

November 12: Urine I almost clear. Bacteria 300,000,000.

November 14: Urine I clear. Bacteria 400,000,000.

November 23: Urine I clear. Bacteria 500,000,000.

November 30: Urine I clear. Bacteria 500,000,000.

December 24: Dismissed after tests.

This was my first case treated with vaccine. I obtained very good results from the first few injections, although a trifle tardy. After persistent use of vaccine there were no recurrences.

CASE 11.—October 15. Railroader, married. Referred by Dr. Vinnedge, of this city. First gonorrhea some fourteen years ago. Has had many attacks since. Syphilis about five years

ago. This attack came on one week before. Discharge heavy. Both urines turbid. Bacteria 100,-000,000.

October 18: Urine I clear.

October 20: Urine I slightly cloudy.

October 24: Urine I slightly cloudy. Bacteria 250,000,000.

October 25: Urine I very slightly cloudy.

November 1: Urine I clear.

November 7: Urine I almost clear. Bacteria 250,000,000. Urine remained clear of pus, and patient was discharged after thorough prostatic massage and tests.

This patient could only report for treatment every few days, yet he responded beautifully to the vaccine.

CASE 12.—September 9. Student, single, first gonorrhea, first day, no microscopical examination. Slight discharge. Urine I clear. Routine treatment consisted of irrigations, which held the disease in check and apparently cured it.

September 26: Patient returned from a test with slight recurrence, and vaccine was given to observe results. Bacteria 100,000,000. Urine gradually cleared up and in eight days seemed well. Patient was given only the one injection and was discharged early in December after tests.

This case is hardly worth recording, except as cumulative evidence.

CASE 13.—September 12. Student, single, first gonorrhea, third day, six days postcoitus, urine cloudy, routine treatment irrigations.

September 25: Urine I cloudy, II slightly cloudy. Bacteria 66,000,000.

September 26: Urine I slightly cloudy, II almost clear. No depression.

September 27: Urine I slightly cloudy, II almost clear. Bacteria 100,000,000.

September 28: Urine I cloudy, II cloudy. Bacteria 100,000,000.

September 30: Urine I slightly cloudy, II slightly cloudy. Bacteria 150,000,000.

October 1 and 2: Urine I almost clear, II clear.

October 3: Urine I clear.

October 5: Urine I cloudy, II cloudy. Bacteria 150,000,000. The urine remained almost clear of pus till

October 10: Urine I cloudy, II cloudy. Bacteria 150,000,000.

October 11: Urine I slightly cloudy. Patient's urine became free of pus shortly after, suffering slight recurrences at times due to prostatic massage.

November 2: Urine I cloudy, II cloudy. Bacteria 200,000,000.

November 3: Urine I clear, II clear.

November 5: Urine I clear. Bacteria 250,000,000.

November 7: Urine I cloudy.

November 8 and 9: Urine I clear.

November 10: Urine I almost clear. Bacteria 250,000,000.

November 19: Urine I clear. Bacteria 300,000,000. Urine remained clear during rest of treatment, although on

November 28: Bacteria 500,000,000.

December 1: Bacteria 500,000,000.

December 5: Bacteria 500,000,000.

The injections of vaccine were apparently given too close together in the early part of the treatment, as the patient was kept in a state of constant reaction and not given an opportunity for a period of improvement before the next injection was given.

CASE 14.—November 24. Wholesale merchant, married, second gonorrhea, second day, slight discharge, urine clear, containing filaments. Routine treatment consisted of irrigation; bacteria, 50,000,000, given as initial dose.

December 1: Urine remained clear during time of treatment, with the exception of a few filaments containing pus. Bacteria 100,000,000. For about a week after light irrigations were given and the case dismissed after appropriate tests. This case took such a light form that I regret that I did not make a microscopic examination from the first discharge, but the fact that the patient suffered considerable depression following his first injection would constitute clinical proof of the presence of gonococci.

CASE 15.—October 26. Railroader, widower, acute gonorrhea, first case, ten days old, discharge heavy, routine treatment consisted of irrigations. Urine I cloudy, II cloudy.

November 3: Urine I turbid, II cloudy. Bacteria 100,000,000.

November 4 and 5: Urine I slightly cloudy.

November 6 and 7: Urine I very slightly cloudy.

November 10: Urine I slightly cloudy. Bacteria 100,000,000.

November 11: Urine I slightly cloudy, II slightly cloudy.

November 17: Missed treatment until to-day. Urine I turbid. Bacteria 200,000,000.

November 18: Urine I slightly cloudy.

November 19: Urine I clear, II clear.

December 1: Urine clear to date. Bacteria 200,000,000.

Patient was discharged after thorough prostatic massage and tests to demonstrate cure.

This case gives a clear demonstration of the beautiful improvement that may be obtained from the use of the vaccine. This patient was very irregular and indifferent in his treatment, yet the vaccine caused some noticeable improvement after each injection, and in this type of patient is certainly a God-send.

CASE 16.—November 4. Railroader, single, first gonorrhea two years ago, second case about one year ago, third case three weeks ago. Patient came with an orcho-epididymitis complicating the case, which was of two days' standing. Urine turbid. Bacteria 100,000,000.

November 8: Urine I turbid, II cloudy. Bacteria 150,000,000.

November 11: Testicle very sore. Patient put to bed.

November 16: Patient called at office; felt fine. Urine clear. Bacteria 200,000,000. Patient was kept under observation for several weeks after, requiring no further active treatment, and was subsequently discharged as cured after appropriate tests.

CASE 17.—November 9. Proprietor of amusement parlor, Williamsport, Ind. First gonorrhea three weeks ago. Routine treatment consisted of irrigations, morning and evening. Urine slightly cloudy, complained of heavy feeling in the perineum. prostate slightly enlarged and acutely inflamed.

November 11: Urine I slightly cloudy, II not obtained. Bacteria 50,000,000.

November 12: Urine I cloudy, II not obtained.

November 13: Urine I cloudy, II slightly cloudy.

November 14: Urine I slightly cloudy. Bacteria 66,000,000.

November 18: Urine I slightly cloudy. Bacteria 100,000,000.

November 19, 20 and 21: Urine I almost clear. Heavy prostatic sensation gone.

November 22: Urine I slightly cloudy. Bacteria 150,000,000.

November 23, 24, 25 and 26: Urine almost clear.

November 28: Urine I clear, and patient proceeded to complete recovery without further incident.

CASE 18.—November 24. Butcher, single, no other venereal history. First gonorrhea four years ago, lasting some twelve months. Second case, second day, slight discharge, urine almost clear. Routine treatment, irrigations.

December 1: Acute prostatic pains. Urine I slightly cloudy. Bacteria 66,000,000.

December 2 and 3: Urine I slightly cloudy.

December 4: Urine I almost clear.

December 5: Urine I very slightly cloudy. Bacteria 100,000,000.

December 6, 7 and 8: Urine I almost clear.

December 9 and 10: Urine I slightly cloudy.

December 11: Urine I slightly cloudy. Bacteria 250,000,000.

December 14: Urine I slightly cloudy. Bacteria 250,000,000.

December 15: Urine I almost clear.

December 16: Urine I clear. Urine remained clear until cured and tests failed to produce any recurrence.

In many of these cases the vaccine was not used at first, as I expected to use it only in those cases that would not respond properly to irrigations. However, I am now using it from the first day of treatment, and a few of the latter cases in this series were so treated.

CASE 19.—November 28. Student, single, first gonorrhea, second day, free discharge. Routine treatment, irrigations. Urine cloudy.

November 29: Urine I almost clear, II clear. Bacteria 50,000,000.

November 30: Urine I almost clear.

December 1: Urine I clear.

December 2: Urine I clear. Bacteria 100,000,000.

December 7: Urine clear to date. Bacteria 150,000,000.

December 9: Urine I clear. Bacteria 200,000,000.

December 13: Urine I clear. Bacteria 250,000,000.

December 15: Urine I clear. Bacteria 250,000,000.

December 20: Urine I clear. Bacteria 250,000,000. Discharged as cured.

This case was almost aborted, inasmuch as it was kept from developing into a gonorrhea of the usual severity, and I believe we can credit the vaccine with this result.

CASE 20.—November 21. Clerk, single, first gonorrhea, second day. Urine almost clear. Routine treatment irrigations. Bacteria 50,000,000.

November 22: Urine I almost clear.

November 23: Urine I cloudy, II clear. Bacteria 66,000,000.

November 24: Urine I slightly cloudy and patient slightly depressed.

November 25: Urine I almost clear, II clear.

November 26: Urine I clear. Bacteria 150,000,000.

November 30: Urine I still clear. Bacteria 100,000,000.

December 3: Urine I clear. Bacteria 100,000,000.

December 7: Urine I almost clear, II clear. Bacteria 100,000,000.

December 10: Urine I almost clear, II clear. Bacteria 200,000,000.

December 12: Urine I cloudy, II clear. Bacteria 250,000,000.

December 13 and 14: Urine I cloudy, II cloudy.

December 16: Urine I cloudy, II cloudy. Bacteria 250,000,000.

December 17: Urine I cloudy, II cloudy.

December 18: Urine I very slightly cloudy, II almost clear.

December 19: Urine I almost clear, II almost clear.

December 20: Urine I clear, II clear.

December 23: Urine I clear, II clear.

December 30: Urine I clear, II clear. Urine clear to date and patient discharged as cured, having passed several tests to prove cure.

While I have read several series of histories treated by some proprietary medicine that really make this series look like the work of an amateur, and by comparison unaccountably slow in obtaining a cure, yet this series demonstrates that, with or without irrigation, the injection of gonococcic vaccine is followed after several injections with marked improvement. Often the following day a considerable diminution of pus in the urine can be noticed that would not come from and could not be assigned to the irrigations alone. While it is true that with irrigations the case will fluctuate in intensity with sudden and unaccountable recurrences and equally sudden and unaccountable improvement, yet no one will claim that the improvement following the vaccine injection is merely a coincidence.

513 Columbia Street.

REPORT OF A CASE OF MASTOIDITIS. COMPLICATED WITH ACUTE CIR- CUMSCRIBED EXTRADURAL ABSCESS.

JOHN J. KYLE, M.D.
INDIANAPOLIS, IND.

The report of the following case accentuates the necessity of early interference in suspected intracranial complication following *acute* or *chronic* middle-ear suppuration.

A suppuration in the meninges or encephalon may go to spontaneous recovery, but this is very unlikely. The presence of pus in the meninges or vein from a suppurating ear is indicated by rigors or chill and elevation of temperature. Rigors or chill, recurring at intervals, followed by rise of temperature, variable in character, is the highest evidence of intracranial complication in middle-ear suppuration, and, in the absence of evidence of a lesion in some other part of the body capable of producing like symptoms, is sufficient notice of the wisdom of immediate operative exploration. When an abscess involving the dura has once become general, that is after meningitis is established, operative procedure is less liable to bring about a cure, and the same rule will follow in jugular phlebitis or thrombosis. After the petrosal or cavernous sinuses have become involved, operation upon the jugular vein

is too late. A metastasis from a primary jugular vein or lateral sinus thrombosis in some other portion of the body may go on to spontaneous recovery, and likewise a jugular vein and lateral sinus thrombosis. The sinus and vein become hard and fibrinous in character and the lumen obliterated. Sometimes, from the effort at spontaneous cure, a dry gangrenous condition of the approximal structures may occur.

The pathological change which takes place may, in the beginning, be a thrombophlebitis or an obliterating process beginning in the intima of the vein. An obliterating process beginning as a phlebitis is more liable to a fatal termination than one beginning in the intima. If, however, a suppuration continues in the middle ear, or is cured only to recur, a new infection may start along the obliterated sinus and extend to the sinus of the brain, the heart, lungs, liver, or to some other part of the body. In such cases, the removal of the collapsed and hardened jugular vein can do no good as a curative measure.

The earlier a thrombosed vein is detected the greater the possibility of a cure by operation, and the objective signs of such a condition are the chill or rigors and peculiar septic temperature. With chill and temperature accompanying middle-ear suppuration, extra- or intradural abscess, sinus phlebitis or sinus thrombosis should be suspected and immediate exploration will disclose the condition. Exploration of the sinus contents with a glass-barrel hypodermic syringe, as soon as the sinus wall is explored, under hot saline irrigation of the parts, is the proper procedure. The tactile sense is of value in the diagnosis, but it should not take the place of the diagnostic value of the glass-barrel hypodermic syringe. If blood is coursing freely through the vein, the barrel quickly fills with blood; if there is little blood, there is a corresponding slowness in filling the syringe. Aspiration of the sinus contents does not always give positive proof of the presence or absence of a partial thrombus; however, the peculiar softness of the sinus wall, ease with which the needle passes into a full sinus, and the color of the sinus, are highly suggestive signs of a normal sinus. If normal, the easily drawn blood will be distinctly venous colored, but if a thrombosis exists the little blood which may be withdrawn will probably be brownish-red in color.

There is a condition of the bone which I have observed which may be present in sinus thrombosis and suggests deeper complications, and that is islands of bluish or dark, necrotic spots, variable in size, in the medullary spaces of the temporal bone, usually extending backward and be-

yond the area of the sinus. The more chronic the sinus involvement the more marked are the necrotic areas.

The exposure of the dura is neither difficult nor dangerous, and in suspected acute abscess, extradural in character, pus, if present, will escape as soon as the inner layer of bone is chipped away. In intradural abscess, the dura will probably bulge and show by its color the location of the pus. A small incision followed by free irrigation with hot normal salt solution will usually evacuate all septic matter. The irrigation should be thorough and continued for quite a while so that all particles of septic matter will be washed away and a hyperemic condition established, which is essential for the early repair of the parts, as well as the destruction of any bacteria or inflammation which may be present.

If the abscess has brought about a localized necrosis of the dura, the necrotic edges should be clipped way with scissors. The question of placing a drain in the dural wound will have to be left to the orientation of the operator. If only a small amount of pus existed, and irrigation has been thorough, the wound will heal without drainage; however, if there has been much destruction of tissue, a very thin strip of iodoform gauze may be inserted into the wound. If a serous or purulent meningitis occurs, lumbar puncture should be performed and repeated as indicated. The quality of the cerebrospinal fluid will indicate the status of the meningitis. The tendency of a circumscribed collection of pus, either intradural or extradural, is to empty by distinct pulsation upon opening the skull or incision of the dura, and with free hot saline irrigation there is little danger of further infection. In consequence of this natural condition, artificial drainage is often necessary, as shown in the following report of a case of circumscribed collection of pus in the meninges. This case was probably in the beginning an extradural abscess and the infection was only allowed to continue long enough to bring about a circumscribed destruction of the dura without involvement of the arachnoid.

A. K., aged 8 years, one week before I saw the case, developed an acute otitis media purulenta, with spontaneous rupture of the drum. The patient complained for four or five days of pain in the ears, but was up and about. On the fifth day, Saturday, he suffered a rise of temperature and pain over the temple, radiating toward the vertex on the right side.

The discharge in the meantime had changed from a thick to a thin mucopurulent consistency. Sunday morning the patient had a very light

chill followed by a rise of temperature. The pain centered in the vertex and became severe. During the day the patient suffered only from the localized pain and continued pyrexia. In the evening a distinct chill came on, followed by a rise of temperature, and when I saw him at 8 o'clock his temperature was 103° and he was complaining greatly of the pain in the top of the head with some dread of light. An ice-cap had been applied by the attending physician. There was distinct tenderness of the mastoid with little or no swelling. The discharge from the auditory canal was mucopurulent in character and very profuse.

We operated at 10 o'clock Sunday night, exposing the antrum and obliterating all the mastoid cells, which were found to be filled with pus. We limited the operation to the simple mastoid, with the exception that at the time of the operation a paracentesis of the drum was performed. No involvement of the bony sinus wall could be detected. The bone was carefully inspected for necrotic spots, but appeared perfectly sound. The following morning at 6 a. m. the temperature was 99, pulse 136, and the patient making no complaint. At 12 noon the temperature was 99; at 1 p. m. a distinct chill came on and the temperature began a rapid ascent. During this time, however, the patient made no complaint of pain. At 2 o'clock the temperature was 104. An immediate exploration of the sinus and cranial cavity was recommended. Drs. Ayers and Jackson, who had the case in hand, agreed with me, and it was only by the greatest persistence on the part of Dr. Ayres that the family finally gave their consent to the operation.

At 2:30 the child was placed on the operating table; the temperature at this time was 105 per rectum, pulse 160, and respirations 28. An incision horizontal to the original one was made and the bony coating of the sinus removed. Posterior and midway of the sinus, after the bony wall covering the dura was removed for a few millimeters, pus was spontaneously evacuated to the amount of four or five drops, thick and creamy, which came from the wound with distinct pulsations. The bony structure in the area was removed for one-eighth inch, giving free inspection of the dura and cavity. The outer bony sinus wall was removed for at least one inch to give free inspection of the sinus, which was perfectly normal. With a glass hypodermic syringe the lumen of the sinus was explored. Blood quickly filled the syringe, showing that probably no disease of the sinus wall or contents existed. The small pus cavity and the region behind the

dura were irrigated with hot normal salt solution. No gauze drainage was placed in the cranial wound. The sinus was loosely covered with iodoform gauze and the mastoid cavity gently packed with iodoform gauze. The temperature after the child was returned to the room was 103, but dropped one degree each hour until 99 was reached. The temperature then remained practically normal, except on the second day, when for three hours it varied between 99.8 and 101.

It is interesting to note the variations in the temperature during the convalescence. The subnormal temperature at times probably indicated a very low vitality. The discharge from the middle ear stopped on about the thirtieth day. The recovery was complete in a few weeks. However, the postauricular wound is very marked. The wound was slow in dermatizing and for a number of weeks granulations persisted in forming, which were removed, and the surface treated with astringents, etc., with little or no result. However, with the application of 33 percent bismuth subnitrate in vaselin dermatization quickly took place.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from page 249, Vol. II.)

PIONEER PHYSICIANS OF CLAY COUNTY.
BY G. W. FINLEY, BRAZIL, IND.

Replying to your inquiry for data as to pioneer physicians of Clay County, I have been able, after diligent inquiry and search of old records, to collect memoranda as to several whose names do not appear in Transactions of the State Society.

The very earliest of whom I can find mention are Drs. Ephraim Kester and Absalom Briley, who came to the southern part of what is now Clay county about 1818 or 1820, from Kentucky, several years before the county was organized. Although never located in towns, they did extensive practice among early settlers over a radius of twenty-five miles from their homes. They died in 1873 and 1878, respectively, each having reached the age of eighty-five.

Dr. Nathaniel Usher, born in New York, 1792, died in Brazil, Ind., 1875, after forty years' practice in this county.

Dr. William H. Gifford, born in Kentucky, 1804, came to Williamstown, Ind., 1839, died at

Brazil, 1890, after fifty-one years' practice, leaving a son, Joseph C., and a grandson, William H., as worthy successors in the work.

Dr. W. B. Hawkins, born at Washington, Pa., 1814, died in Brazil, Ind., 1891, after forty-five years' work in Indiana, leaving a son, Robert W., a physician here.

Dr. James M. Price, born in Virginia, 1827, died in Brazil, 1895, having practiced in this county thirty-five years. His son, Dr. John Price, died before his father.

Dr. John Gilfillan had a wide practice from Centerpoint for forty years in the early history of the county and died there in 1876.

Dr. John Williams of Bowling Green, still living at the age of ninety-seven, practiced there from 1830 until feebleness compelled his retirement in 1900.

I regret very much the incompleteness of our early records.

OLDER PHYSICIANS OF FRANKLIN COUNTY.

The following list comprises only a portion of the names of physicians of Franklin County. I am under obligations to Dr. C. H. Mayfield, of Brookville, for this interesting paper. A number of names will be found in the alphabetical list elsewhere.

George Berry (1811-1892) was born in Rockingham County, Virginia, Feb. 17, 1811. He began practice in Brookville in 1832, and for many years was the principal surgeon of that region. With one exception he was the oldest practitioner in the White Water Valley at the time of his death, March 19, 1892. He was a surgeon in the Mexican war with the Sixteenth Regiment, U. S. Infantry. He was elected State Senator in 1843-46, and again in 1849. He was a member of the Constitutional Convention of 1852.

Thomas W. Colescott (1816-1900) was born in Caroline County, Maryland, Feb. 8, 1816. He practiced in Brookville until 1878, when he was compelled to retire from active practice on account of ill health. He held the chair of anatomy in the University of Louisville for several years and was surgeon in charge of the hospitals in and about Louisville during the Civil war. He was regarded as one of the best surgeons of Franklin County.

John B. Davis (1807-1869) was born at Brookfield, N. Y., July 2, 1807; died in Brookville July 14, 1869.

Thomas Gifford (1816-1885) was born at Penn Yan, Yates County, New York, Dec. 17, 1816; graduated from Ohio Medical College in

1846. He was elected to the General Assembly of the state in 1858 and was re-elected; elected State Senator in 1862 and re-elected; died June 14, 1885.

John R. Goodwin (1820-1880) was born at Brookville July 15, 1820; graduated at Depauw University in 1845; later at the Ohio Medical College; practiced in Brookville until beginning of the Civil war; he was surgeon of the Thirty-Seventh Regiment Indiana Volunteers until close of war; then for eight years was in the Department of the Interior under Johnson and Grant; later was engaged in banking business until his death, May 3, 1880.

Rufus Haymond (1805-1886) was born in Clarksburg, W. Va., June 5, 1805. He came to Brookville in 1826. He was a member of the State Legislature and was a naturalist of national reputation, contributing articles of value. He had charge of the geological survey of Franklin County in 1869. Died at Brookville July 29, 1886.

Judah Hinkley (1801-1875) was born in Massachusetts March 10, 1801; came to Indiana in 1820 and began practice in Springfield township, Franklin County, and continued until 1868, when he retired and removed to Oxford, Ohio. Died July 6, 1875.

John H. Quick (1818-1906) was born near Brookville Oct. 22, 1818; began practice June 1, 1840, at Drewersburg, Franklin County; then Cedar Grove, in same county, in 1842, and at Brookville from 1854 to the time of his death, Oct. 13, 1906.

John Cleaver (1796-1865) was not a graduate of a medical college.

Cornelius Cain (1808-1903) was born near Wilmington, Dela., Aug. 1, 1808; came to Indiana and settled in Brookville in 1827; later practiced medicine at Metamora and Laurel. In 1857 located at Clarksburg, where he continued to reside until his death, which occurred June 28, 1903.

Erasmus Darwin Crookshank* (1807-1876) was born at Whitehall, N. Y., April 28, 1807; located at Fairfield about 1838; was elected to the State Legislature in 1844; in 1849 he removed to Hamilton County, Ohio, near Cheviot, where he continued to practice medicine until his death, March 4, 1876.—Letter from Florence M. Tait, Cheviot, a granddaughter.

The following physicians practiced in Brookville at the dates indicated:

* I give the spelling of the granddaughter, but notice that in other instances it is spelled "Cruikshank." —G.W.H.K.

Lovel, 1810; Johnson, 1816; George D. Murdoek, 1816; J. E. Bush, 1819; Joseph Moffett, 1818; Temple E. Gayle, 1820; John, Jr., 1821; Morris, 1821; Isaac G. John, 1824; B. S. Noble, 1830; T. J. Cogley, 1836; Whipple, 1836; Thomas Kennedy, 1847; William Coster, 1847, and Joseph Chitwood, 1838.

MEDICAL MEN OF RIPLEY COUNTY.

In reply to an inquiry Dr. James Anderson, of Versailles, has kindly furnished me with some records of the early physicians of that county.

He says that he was well acquainted with Dr. W. T. S. Cornett, who practiced here until about 1868, when he removed to Madison.

Dr. James K. Francis practiced at Cross Plains, Ripley County, Indiana, from 1844 to about 1852, dying there during that year.

Dr. Richard B. Conn practiced in Ripley County about 1848 to 1850, when he removed to Champaign, Ill., and practiced there for some years.

Drs. Cornett, Francis, Alexander J. Mullen and Conn were present at the formation of the State Medical Society in June, 1849.

Dr. William Anderson practiced medicine and surgery at Versailles from 1839 to 1861, and was surgeon of the Thirty-seventh Regiment Indiana Volunteers for three years and staff surgeon one year longer. At the close of the war he returned to this place and practiced from 1865 to 1880.

Drs. Alexander J. Mullen and Bernard F. Mullen, brothers, practiced at Napoleon for many years. Dr. Bernard F. Mullen was Colonel of the Thirty-fifth Regiment Indiana Volunteers and Dr. Alexander J. Mullen was surgeon of the same regiment. Dr. Bernard died at Indianapolis some years after the close of the Civil war. Dr. Alexander went to St. Louis after he came from the army and practiced there for some years, dying in that place.

The late Major Jonathan W. Gordon practiced medicine at Versailles during the years 1846 and 1847. Later he took up the study and practice of law.

KOSCIUSKO COUNTY MEDICAL SOCIETY.

I am indebted to Dr. C. N. Howard, Secretary of the Kosciusko County Medical Society, for the following notes, which he gleaned from the "New Historical Atlas of Kosciusko County."

At the session of the General Assembly of 1834-5 the boundaries of Kosciusko County were defined and established. It was named by Hon. John B. Chapman after Thaddeus Kosciusko, the young Polish nobleman of distinguished family,

who aided the American cause during the war of the Revolution, being one of General Washington's staff officers.

The Kosciusko County Medical Society was incorporated Jan. 21, 1847, by the General Assembly of the State of Indiana. Among the first members of the society were Drs. Rowland Willard, G. W. Staey, J. K. Leedy, Edward R. Parks, William E. Sarber, D. Bowman, S. C. Gray, L. B. Boggs, J. A. Chandler, L. E. Terry, William Parks, Henry Gilbert, F. W. Taylor, John Jackson, Z. C. Johnson, A. B. Grichfield, R. M. Kendall and G. W. Kosdick.

Webber, Irwin W. (1846-1907) commenced the practice of his profession in Warsaw, Kosciusko County, in 1870. For a time he was United States Pension Examiner at Warsaw. He was President of the Kosciusko County Medical Society in 1887, and was Secretary of the Society at the time of his death.

Woolley, Amos (1829-1899) came to Kosciusko County in 1857, practicing medicine at Palestine. In 1869 he removed to Warsaw. In 1866 he assisted in the organization of the Medical College at Fort Wayne, Ind., and afterward graduated with honor from that institution.

WHITE COUNTY MEDICAL SOCIETY.

Drs. Grant Goodwin and F. E. Lister, of Monticello, have furnished me the following information concerning physicians of White County who have not been heretofore reported in the Transactions.

The White County Medical Society was organized in April, 1862. The charter members were Drs. Hamen and Anderson, Monticello; Richardson, Monon; Thomas, Reynolds, and Medaris, of Brookston.

Dr. William H. Ball was born in Henry County, Kentucky, Jan. 23, 1823. He began practice at Battle Ground, Ind., about 1851. He was a graduate of a medical college at Louisville, Ky. He practiced in Brookston from 1856 to 1880, then moved to California, where he died in 1890.

Dr. Timothy Taylor attended first session of lectures at Starling Medical College in 1847 and 1848. He began to practice in Brookston about 1850, and left here March 1, 1859. He died in 1908, near Richmond, Ind.

Dr. John Medaris came to Brookston in March, 1859, and has practiced here ever since. He is now 94 years old.*

* I have departed from my usual rule of omitting living physicians, but this man, at the age of ninety-four engaged in an active practice of medicine, deserves this little recognition.—G. W. H. K.

OLDER PHYSICIANS OF STEUBEN COUNTY.

I am under obligations to Dr. Mary Ritter, of Angola, for the following list of pioneer physicians of Steuben County:

Drs. James McConnell, Angola (1810-1844); George W. McConnell, Angola (1816-1894); L. E. Carver, Angola (1806-1889); J. C. Kmisey, Angola (1819-——); C. D. Rice, Angola (1828-1875); William Weicht, Angola (1822-1889); W. A. Wood, Angola (1827-1868); M. F. Morse, Angola (1814-1898).

MEDICAL HISTORY OF FOUNTAIN COUNTY.

Dr. George Rowland, Covington, Ind., has transmitted to me a very interesting paper on the medical history of Fountain City, and I only regret that the length of the paper prevents the complete publication of the same.

On Dec. 30, 1825, the Legislature passed a law creating Fountain County. On the first Monday in May, 1826, the boundaries of the county were fixed and the county seat established at Covington.

The following named physicians met in Covington on the first Thursday in April, 1867, and organized the Fountain County Medical Society: Drs. C. V. Jones, President, Samuel J. Weldon, Secretary; C. D. Watson, G. S. Jones, William Colvert, William C. Cole and George Rowland.

Dr. John Hamilton, born in Saratoga County, New York, Jan. 7, 1800, came to Covington March 31, 1827, and made it his permanent home. He was the first physician to locate in Fountain County. He was a pioneer and a busy practitioner of medicine, riding on horseback from ten to sixty miles a day, along by-paths, as there were few roads. Milk sickness and fever and ague prevailed. Medicines were few and commanded a high price and were brought from Cincinnati on a steamboat up the Wabash River to Covington. Dr. Hamilton was a successful physician, a graduate of the medical college at Burlington, Vt. He also started the first drug store in this county at Covington.

Dr. John Crawford came to Fountain County in 1828. He was educated in Philadelphia and a graduate of the Medical College of Ohio. He died Sept. 29, 1847. Dr. Crawford was well versed in medicine and a successful practitioner and a man of few words.

Dr. Hitchcock was an early pioneer and came to this city in 1829, but soon afterward went to the Black Hawk war.

Dr. Jesse Bowen practiced medicine in the county from 1829 to 1840.

Dr. Joseph Jones came in 1832. He was a peculiar man, tall and the people nicknamed him "Long Jones." There were several other Dr. Jones, and Dr. "Long Jones" tried to have the Legislature change his name to Talbott, the maiden name of his mother.

Dr. Keely came in 1833 and remained but a short time, when he removed to Iowa.

Dr. John S. Jones, nicknamed "Picayune," came in 1834. He was a druggist, but practiced medicine to some extent.

Dr. Lorenzo Rush came to this county in 1840. He was a good physician, scientific and well educated. He was tall, dignified, gentlemanly and a popular physician.

Dr. Irish came in 1844 and was a successful physician, serving later as a surgeon in the Civil war.

Dr. Reuben M. Hill came to Fountain County in 1847 and located at Covington. He was a scientific physician and well versed in medicine. He had an extreme disgust for quackery, enjoyed a large practice and was quite a money maker. He was a bachelor. Later in life he was a great sufferer from a chronic disease, from which he secured no permanent relief, and on July 5, 1880, at the noon hour, while his nurse had gone for a luncheon, committed suicide, shooting himself through the head.

Dr. Jehu Adkins read medicine with Dr. "Long" Jones, above mentioned; graduated in Chicago, and located in Jackson Township in 1847. He was a popular physician and had a great reputation in the treatment of milk sickness, which was then very prevalent; also secured quite a reputation by the performance of an operation for club foot upon a child six months old. At the time of his death he was the owner of nearly twelve hundred acres of land, bought at a low price, and subsequently increased in value until he amassed a fortune.

Drs. O. S. Maxwell and Bell located at Robroy in 1833. Dr. Cox located at Portland in 1830. Dr. Scott located at Newton in 1834. Dr. Worthington located at Attica in 1830. Dr. Robert Stevens located near old Chambersburg during the forties. Dr. Knight located in old Chambersburg before the Civil War. He was very deaf and always rode in an old-fashioned gig. Dr. Greenwood came in the forties and practiced at Robroy. Dr. Marquam, an eccentric man, located in old Chambersburg during the Civil War. He practiced in the southeast part of the county from 1855 to 1860. He was indicted for murder by producing an abortion. In the trial he was prosecuted and defended by eminent counsel and was acquitted.

Dr. Newton Spinning probably practiced medicine longer than any other physician in Fountain County—a period of more than fifty years. He died of pneumonia, result of lagrippe, on Feb. 11, 1890.

Dr. Thomas Rowland, my father, was born in Lowdon County, Virginia, July 25, 1810, and read medicine with Dr. Crawford, already mentioned. He located in Hillsboro in 1839, and afterward located at old Chambersburg, and was a busy and successful practitioner of medicine until his death, which occurred in August, 1864. He was well versed in medicine and had an extensive practice in obstetrics and diseases of women. He was a fine conversationalist and loved to mingle with medical men.

Dr. Caleb V. Jones came to Covington in the fall of 1840 and practiced medicine for forty years. [See "Alphabetical List of Deceased Physicians" in future chapter.]

Dr. William Colvert located near Stone Bluff; was a distinguished pioneer physician of Fountain County. He was born in Ohio in 1819, and came to this county during his boyhood, attended the University of Greencastle and afterward read medicine with Dr. Crawford. He was a successful physician from 1847 to his death, which occurred a few years ago. Before reading medicine he taught for some years in the public schools, and his most noted pupil was the Hon. D. W. Voorhees.

Dr. Joseph Ogden came to this county in the early forties. He was an excellent physician. Dr. Waite located in this county at an early date. Dr. Bryant was also an early pioneer. Dr. Chester Clark came at an early date to Covington, but in later years abandoned the practice for the nursery business. Dr. McElwee came to the county after the Civil War. Dr. John S. Riffle began the study of medicine in 1849. He practiced medicine at Newton and in Veedersburg, and was a member of the United States pension board after 1867. He was an assistant surgeon in the Fortieth Regiment, Indiana Volunteers. Drs. Miles and Sherman were practitioners at one time at Newtown.

Dr. James C. Burlington graduated in 1877 from Cincinnati Medical College. Located at Attica in 1878. Died several years ago. Dr. A. L. Whitehall practiced near Newtown in 1832, and later at Attica until his death. Dr. Samuel Fullenwider at an early date practiced at Newtown. Dr. Leach at one time practiced at Attica; removed to Crawfordsville and later to Park County. Dr. George C. Hays located at Hillsboro and died there after a long practice. He was a graduate of the Medical College of

Indiana. Dr. John W. Mock, a graduate of a medical college of Ohio, 1863, was a surgeon in the One Hundred and Eleventh Regiment, Ohio Volunteers.

Dr. Samuel J. Weldon was born in London, England, June, 1800, and graduated in New York City. He was well versed in medicine, a fine conversationalist and a prominent druggist. He was present at the formation of the Indiana State Medical Society in 1849, and also at the organization of the Fountain County Medical Society in April, 1867.

Dr. Samuel I. Mock graduated at the Medical College of Ohio in 1874; came to Covington in 1879, and afterward removed to Iowa, where he died shortly afterward. Dr. C. D. Watson, a graduate of Rush Medical College, came to Covington, was present at the organization of the Fountain County Medical Society, and afterward removed to California. Dr. John T. Wells practiced in Veedersburg in 1876. Dr. A. J. McLeland practiced at Veedersburg for some years and died in that village.

EARLY PHYSICIANS OF JACKSON COUNTY.

For the facts in the histories of the following physicians I am indebted to Dr. A. G. Osterman, of Seymour, Ind., the paper being forwarded to me by Dr. G. H. Kamman, Secretary of the Jackson County Medical Society.

The history of the early physicians of Jackson County is not very well known. Tradition tells of Dr. Dudley, who located in this county and platted the village of Dudleytown in 1810. While the more populous parts of the county of that time, Vallonia and Brownstown, certainly had physicians, yet nothing authentic is known of their names.

Dr. Samuel Wert, of German parentage, was born in Pennsylvania in 1794; graduated from Jefferson Medical College in 1810; after an eventful career in the Spanish navy and in Mexico, located in Brownstown in 1825, where he practiced successfully until 1863, the year of his death.

Dr. Solomon Jackson, the next physician of whom we hear, practiced in Rockford in 1835.

Drs. James Crippen and David Vanuise were at Reddington about 1838. The late Dr. Wilson located near the present village of Sparksville about the same time. Two more physicians were at Vallonia whose names are not known to the author. This was about the number of physicians who were located in the county up to 1840. With the increase of population between the forties and fifties physicians began to locate in the county.

Dr. James H. Green began practice in Dudleytown in 1846. Dr. Stage then located at what is now known as Sidney about the same time.

The first county society was organized on April 13, 1852. Dr. Wert was its first president, Dr. D. B. Hillis vice-president, Dr. J. L. Roe recording secretary, and Dr. E. Long librarian. Other members present were Drs. Ford, Morgan and Bain. At a meeting two months later Drs. John Williamson, James H. Green, C. T. Williamson, J. T. Monroe, E. D. Wert and S. H. Charlton were elected to membership.

Dr. Brand, a graduate of Vienna and a pupil of the elder Rokitansky, located at Rockford in 1848. Dr. Roesgen, a graduate of Heidelberg and Bonn, located at Dudleytown in 1851; both these men were well grounded in medicine and were gentlemen of remarkable diagnostic talents, who added credit to their profession, as well as the profession of southern Indiana, during their sojourn among the people of Jackson County. These were all the members of the profession, as far as the author is able to say, that were located in the county up to 1852.

During the sixties Drs. Shoots and Rodman were at Freetown, Drs. Joseph Davis, Bain and Shields at Cortland, Dr. Fields at Tampico, Dr. Wells at Clear Spring, Drs. Cummings and Gibson at Houston, Drs. John T. Shields, Newkirk and J. D. Monroe located at Seymour. Dr. Tinsch began the practice of medicine about the same time, but his first location is unknown. Dr. Robertson located at Vallonia, and a physician whose name is unknown practiced for a few years at what is now known as Newry.

At a meeting of the Board of County Commissioners in June, 1862, a petition referring to the pauper practice of the county was presented to the board, signed by the following physicians, then in active practice in the county, but not all members of the county society: Drs. Wert, S. J. Stage, C. T. Williamson, L. Z. Shewmaker, Jacob Boaz, T. A. Williamson, J. H. Payne, Fields, Smith, Kimberline, Maxwell, Bland, Sapper, Hatfield, Daniels, Ramsey, Robertson, Green and Bain. These men were all in active practice in this county.

In those days there were scarcely any well defined roads and patients were far apart. Visits were made on horseback and the ample saddle bags were always the badge of the doctor. It was before the days of refinement of pharmacy. Roots, herbs and barks were the armamentarium of the practitioner. Calomel and jalap were dealt unsparingly. The bitter Peruvian bark and the lancet were their only fever remedies. Anesthesia was unknown; but this did not deter

them from performing major and minor operations. They worked sometimes under the most trying conditions. Those early days were truly heroic ones: no less for the physician than the patient. Yet, with all this seeming primitiveness and the limited means of practicing medicine and surgery, these men were successful and their patients lived to bless them. The earlier and older ones have all passed away. Some rest in unmarked graves. No lordly monuments commemorate the spot made sacred as the resting place of these heroes; yet heroes these men were. They performed the most heroic service, and oftentimes without reward, at the call of their patients, at any hour, in storm and stress and in midnight darkness, with nothing to guide them, and oftentimes straying from the road or path; yet they performed these labors with pleasure and their reward was only the welfare and health of their patients. Truly they bore the cross to attain the crown; the justice of a better world will be their reward.

(To be continued.)

APPENDICITIS.*

B. VAN SWERINGEN, M.D.
FORT WAYNE.

We all learn or should learn from our experiences, and, therefore, our conception of a given condition is apt to alter somewhat as we grow in experience and meet its various manifestations.

In my dealings with a goodly number of cases of appendicitis of various forms I have gained some important facts which I should like to present to you in a more or less rambling sort of way.

It may be said, in the first place, that the profession is tolerably well agreed upon the symptoms presented by the average case of acute infection of the appendix. We are all familiar with the sudden onset of abdominal pain, followed by vomiting and tenderness on pressure, with rigidity of the muscles over the tender area, associated usually with some elevation of temperature and acceleration of the pulse rate. We also have seen cases in which some one or other of these symptoms were absent, presenting a picture variously modified, but yet distinguishable as a case of appendicitis and proven so by operation.

The chronic cases are more difficult of recognition and are easily overlooked by one who has had no experience with this phase of the disease

* Read before the Fort Wayne Medical Society.

There is a class of cases which suffer from abdominal pain at intervals of a few days to a few months, accompanied by some soreness over the region of the appendix. This goes on for several years, it may be, until the organ is removed during an attack of unusual severity, only to find that it presents evidences of a chronic trouble in that it contains concretions or its lumen isstricted or it is angulated or bound down by adhesions.

It is not so difficult to recognize these cases when seen during a period of exacerbation or when there is tenderness.

But when they are seen in the interval with the only symptom complained of being an indigestion, one can not always be sure at the first examination.

There is another class of cases described by several writers under different names. Senn called it "appendicitis obliterans," and Ribbert called it "normal involution of the appendix," while Morris speaks of it as "fibroid degeneration of the appendix."

The latter says that in this process there is replacement of the various structures of the appendix by hyperplastic connective tissue. Nerve filaments persist for a longer time than most other structures in the appendix which is undergoing involution changes, and these nerve filaments are irritated by the contracting connective tissue. In the case of the sensory nerves it produces a sense of discomfort or actual pain. Irritated sympathetic nerve filaments entrapped in the contracting appendix seem to cause an excitation of the intima ganglia of the bowel wall and this leads to derangement of function of the secretory and excretory apparatus of the bowel, causing intractable intestinal dyspepsia.

When seen the appendix looks like a white fibrous cord without a bit of inflammatory reaction, and to one unacquainted with this condition seems totally inadequate to account for the symptoms present in the case. There have been surgeons who refused to remove such an innocent-looking organ for this reason, and there have been those who removed it only because the opportunity was present without expecting to find any relief to the symptoms from such removal and were, therefore, surprised to find that the operation was followed by a cure.

Morris says that fibroid degeneration of the appendix is the most common cause of intestinal dyspepsia and gives the diagnostic points as follows:

1. Hyperesthesia of the right group of lumbar ganglia, when deep pressure is made at a point

about one inch and a half to the right of the navel.

2. Constant presence of gas in the cecum and ascending colon to the hepatic flexure.
3. Intractable intestinal dyspepsia.
4. Persistent discomfort, varying in degree, in the appendix region.
5. An appendix which feels harder than the normal appendix on palpation.

He advises against operation on these cases when the patient is first seen, but if the symptoms persist upon general treatment, even after his fears are allayed, he removes it. A goodly number of such cases do not require operation after they understand the condition.

To illustrate a point in technique, I wish to report the following case: Mrs. C. H., 48 years of age, came to the Lutheran Hospital on the fourth or fifth day of an attack of acute appendicitis and was operated immediately. The appendix was gangrenous and the peritonium involved in the inflammatory process. There was also free pus in the belly and plastic material. The appendix was removed, the stump inverted and the mesentery overcast. Drainage was left down to the stump and one strip into the pelvis.

Two or three silkworm-gut sutures were inserted into the wound at its upper margin and the patient put to bed. Her progress was apparently satisfactory for several days, when she developed some peculiar mental symptoms and the discharge on the dressings became bloody. Her fever rose and her pulse grew in frequency until she died on the fifth day after her admission. The autopsy showed a bloody pus extending up under the liver and over on the left side of the abdomen.

The bleeding was traced to the abdominal wall where a small vessel had been overlooked. I do not think this patient would have recovered even if the hemostasis had been absolute, but it seems to me that her chances would have been greater if there had not been a continual seeping of pabulum for bacteria to thrive in going on from the belly wall. The lesson taught by this case is complete hemostasis.

In regard to the best time to operate, there is a difference of opinion in one class of cases. Morris operates every case as soon as the diagnosis is made, and there are many surgeons who agree with him. In closing his discussion last June, he said that he had never refused to operate on a patient suffering from appendicitis, providing he reached him while he still breathed.

Ochsner, in the same discussion, again reiterated his plan of treatment of the acute infected,

perforated or gangrenous cases when seen later than thirty-six or forty-eight hours after the onset of the attack. There has been so much misunderstanding of his position that it may be well to quote him verbatim. It is as follows:

1. Patients suffering from chronic recurrent appendicitis should be operated on during the interval.

2. Patients suffering from acute appendicitis should be operated on as soon as the diagnosis is made, provided they come under treatment while the infectious material is still confined to the appendix, if a competent surgeon is available.

3. Aside from securing a low mortality, this will prevent all serious complications.

4. In all cases of acute appendicitis, without regard to the treatment contemplated, the administration of food and cathartics by mouth should be absolutely prohibited and large enemas should never be given.

5. In case of nausea or vomiting, or gaseous distention of the abdomen, gastric lavage should be employed.

6. In cases coming under treatment after the infection has extended beyond the tissues of the appendix, especially in the beginning of acute diffuse peritonitis, Conclusions 4 and 5 should be employed until the patient's condition makes operative interference safe.

7. In case no operation is performed, neither nourishment nor cathartics should be given by the mouth until the patient has been free from pain and otherwise normal for at least four days. The same practice should be followed after operation.

8. During the beginning of this treatment not even water should be given by the mouth, the thirst being quenched by rinsing the mouth with cold water and by the use of small enemas. Later small sips of very hot water frequently repeated may be given, and still later small sips of cold water. There is danger in giving water too freely, and there is great danger in giving large enemas.

9. All practitioners of medicine and surgery, as well as the general public, should be impressed with the importance of prohibiting the use of cathartics and food by the mouth, as well as the use of large enemas, in cases of patients suffering from acute appendicitis.

10. It should be constantly borne in mind that even the slightest amount of liquid food of any kind given by the mouth may give rise to dangerous peristalsis.

11. The most convenient form of rectal feeding consists in the use of one ounce of one of the various concentrated foods in the market, dis-

solved in three ounces of warm salt solution, introduced slowly through a soft catheter inserted into the rectum a distance of two or three inches.

12. This form of treatment can not supplant the operative treatment of acute appendicitis, but it can and should be used to reduce the mortality by changing the class of cases in which the mortality is greatest into another class in which the mortality is very small after operation.

This applies particularly to severe acute perforated or gangrenous appendicitis more than thirty-six or forty-eight hours after the beginning of the acute attack.

To Conclusion 8 is now regularly added the excellent method introduced by Dr. Murphy, of administering a continuous enema of normal salt solution with an apparatus which permits the flow of only a drop at a time, so that it will require at least one hour to introduce 1,000 c.c.

This is the Oehsner treatment as given by himself. We all know how it has been misinterpreted by the profession. The average man who has not taken the pains to acquaint himself with the details of it remembers only that he does not operate on acute cases and that he starves the patient, and many of them forget the latter. We have just seen that Oehsner operates on all cases if seen early enough. It is only the neglected cases that he chooses to delay operation in until the symptoms subside under total abstinence of food and water, and then he operates before they leave the hospital.

Morris, on the other hand, teaches that every patient with appendicitis should be operated as soon as seen, no difference what the stage of the disease may be. He advocates the Oehsner starvation treatment and is a firm believer in it, but precedes it by a three- to five-minute operation, which, he claims, does not decrease the patient's chances, but, on the contrary, increases them.

By this short operation, he claims, he does not materially lessen the patient's resistance, and he leaves the patient to his opsonins and phagocytes.

He is enabled to do this short operation mainly by his method of doing as little as he possibly can, and by his method of treating the stump, which is that of simple ligation, after which he touches it with carbolic acid and neutralizes this with alcohol. He claims that the stump adheres at once to the parietal peritoneum, which is just as good a covering as though it were inverted or covered with bowel peritoneum by any one of the so-called ideal methods. Not only have his results been just as good since he has adopted this method of treating the stump, but he has been

able to effect a great saving in time, which makes the patient's convalescence shorter and more comfortable. He uses this method on all kinds of cases.

In regard to drainage, there are a number of men who do not employ drainage as often as formerly, largely due perhaps to the paper of Clark detailing his results in the closure of pyosalpinx cases. Morris, after trying it for a year, thought he had secondary abscesses just often enough to make the method undesirable.

I have the records of four such cases in the last year in which the belly was closed after removing a perforated or gangrenous appendix, which are briefly as follows:

CASE 1.—I. L. H., 35 years of age, a strong healthy man, took sick at 2 o'clock in the morning with pain in the abdomen and vomiting, and was operated that same night. When I saw him his temperature was $102\frac{1}{2}$ ° and his pulse 112. Some old adhesions were found about the base of the appendix and there were deposits of flaky lymph on the appendix and cecum and the peritoneum adjacent showed signs of inflammation. On opening the appendix the mucous membrane was found necrotic and ulcerated and there were fecal concretions. The wound was closed without drainage and the patient made an uninterrupted recovery.

CASE 2.—Mrs. S., 18 years of age, was operated on the third day of an attack of acute appendicitis. The appendix was found gangrenous at the tip and the inflammation was spreading to the peritoneum in the neighborhood. The wound was closed without drainage and the patient did well for about five days, when she began to complain of pain in the side, was tender on pressure and palpation revealed a tumor of some sort in the appendix region. She also had moderate fever and increase in the pulse rate. I thought this would be one case in which I would be obliged to reopen the belly and put in drainage, but I found, to my surprise, one day, that the tumor had disappeared together with the fever and rapid pulse rate. She left the hospital in three weeks. I imagine that there was a small abscess about the stump which found its way into the bowel.

CASE 3.—Miss D., a healthy young girl, 15 years old, was operated the second day of a very acute attack of appendicitis. The appendix was large, hard, strictured at the proximal end and full of feces, pus and concretions. In effecting its delivery it burst through a necrotic area near the base and leaked pus against the abdominal wall and peritoneum, which was badly inflamed. When I proposed to close this wound without drainage, the nurses at St. Joseph's Hospital expressed their disapprobation and said that I would regret it. A large stitch abscess was the

only drawback to her convalescence, and she left the hospital before her three weeks were up. I call this a stitch abscess, though in reality I do not think the stitches had anything whatever to do with it. The infection occurred when the appendix burst during the delivery. The lesson to me, taught by this case, was that the sides of the incision should be carefully protected by gauze during the removal of such an infected mass, because when the muscle or fat is soiled by pus and then the edges closely applied a new focus of infection is started which results in an abscess before the body's defensive process can prevent it.

CASE 4.—Mr. J. F., a farmer, about 35 years of age, was operated on the fourth day of an attack of acute appendicitis. He had a well-marked tumor and was very sensitive over the appendix region, but he had had no fever at any time since his illness began, and his pulse rate was 88. About one inch of the distal end of the appendix was gangrenous and there was a fibrinous deposit on the bowels and anterior pelvic wall. The bowels and omentum encircled and enveloped the appendix completely. Wound closed and a perfectly normal convalescence.

The advantages in being able to close a wound are the lessened liability to hernia and the shorter convalescence without the diversion of a painful change of dressings every morning.

The idea in putting gauze into the belly cavity is to conduct to the surface and remove from the possibility of absorption toxins formed by the bacteria causing the trouble. The idea is a good one, but unfortunately such a drain must necessarily affect but a very small part of the cavity, and that for a very short time, for it is itself enclosed and walled off in a very few hours in most cases. Then, too, while it conducts serum and pus from within outward, it also is capable of conducting bacteria from without inward, and this is what generally happens. In fact, we leave the gauze drain in usually until it does take place, because when this externally introduced suppuration occurs it makes it much easier to remove the gauze. We are all familiar with the fact that we drain many cases where the discharge is little else than serum the first twenty-four hours; it is very much reduced in quantity and of the same character the next time the dressing is changed; the dressings are hardly soiled the third time, and then we begin to see a slight purulent discharge which grows richer and more abundant until the gauze is removed and then gradually subsides. In my opinion, it has been wrong to drain that case. We have only protracted the recovery and added to the patient's discomfort and pain.

TUBERCULOSIS OF THE KIDNEY.

W. S. EHRICH, M.D.
EVANSVILLE, IND.

In selecting this subject, I am trying to encompass two purposes—to take a subject that is attracting the attention of both the medical and lay world and to confine that subject to my own sphere of usefulness.

Tuberculosis of the kidney may be a complication of tuberculosis in other situations, but is often primary or, at least, secondary only to foci in the lower tract. In the former condition, it may never be diagnosed, being entirely overshadowed by the process elsewhere. This point is beautifully illustrated by a case which was admitted into the Charleston (S. C.) City Hospital during my term of service there. The patient, a man about 40 years old, was admitted for pulmonary tuberculosis. Upon examination of the chest and sputum, the diagnosis was verified. At postmortem examination I detected fluctuation below Poupart's ligament upon pressure of the right iliac region. Upon opening up this subject, there was found complete disorganization of the right kidney, and in its stead an abscess cavity extending under Poupart's ligament and containing over a quart of cheesy pus which proved to be tubercular. The left kidney was slightly hypertrophied, probably due to the increased amount of work that it was called upon to do, but otherwise intact.

This also brings out the fact that renal tuberculosis is often, I should say in the majority of cases, unilateral.

The infection may be either ascending or descending. In the ascending form, which is the most common or, at any rate, the form most often recognized, the process is secondary to infection of the ureter, bladder, epididymis or prostate. I have purposely left out any reference to the testicle, since I believe that this organ is rarely, if ever, the seat of primary infection, being almost always secondary to infection of the epididymis.

The descending type is the result of the bacillus being deposited by the blood, usually in the cortical portion of the kidney.

The diagnosis of this trouble presents many difficult problems which can be solved only by most careful and painstaking observation.

In the descending type there is little or no evidence in the earlier stages, except probably slight elevation of temperature, acceleration of pulse

and some of the other signs of incipient tuberculosi elsewhere, with occasionally renal uneasiness, which tell of the true nature of the disease. Later, however, when the abscesses drain into the pelvis of the kidney all doubt can be very soon cleared.

The ascending type presents the same symptoms as pyonephrosis from any other cause, except, of course, the microscopic findings and discovery of lesions in the lower tract. It is here that cystoscopic examination is most valuable both for inspection of the bladder and separation of the urines by ureteral catheterization.

The most prominent symptoms of this trouble are: hematuria, which, though rarely large in amount, is fairly constant, but in many cases may be seen only with the microscope. The ureteral pain so often complained of is due probably to the passage of blood clots formed in the pelvis of the kidney.

The urine is at first clear, but in the later stages becomes purulent and bloody at times. It is always acid in reaction and contains, even when free from blood, over 0.2 per cent. of albumin; also quite a variety of casts.

Tenesmus is a very annoying symptom occurring usually during the urinary act. However, in complication with tubercular ulceration at the vesical neck the tenesmus occurs after as well as during the urination. One of the most painful cases of tenesmus that the writer has ever seen was due to this cause.

Of course, the other symptoms common to all forms of tuberculosis are to be taken into consideration.

The microscopic examination of the urine for tubercle bacillus is a comparatively simple process, provided we can get the urine uncontaminated with the Smegma bacillus. Young and Churchman have written a very interesting description of this procedure. The following simple device which the writer has proposed may be of service: Insert a tube with the end smoothed to the cut-off muscle, starting a flow of sterile water as it enters the meatus. This, by its mechanical effect, will prevent anything entering the tube from the urethra. As soon as the muscle is reached the irrigator is disconnected and a very small catheter passed through the tube and into the bladder. The Smegma bacillus is not seen behind the cut-off muscle, except when introduced there. This procedure is not necessary when ureteral catheterization is employed.

Among the methods of early diagnosis the use of tuberculin is par excellent. By far the most satisfactory method is the subcutaneous injection, but in more or less latent conditions it may do some damage in bringing into activity a quiescent focus. We have, then, the conjunctival and cutaneous reactions which should be of great assistance. The writer's experience in the conjunctival reaction is limited to thirty-seven cases in which very satisfactory results were had with no bad effects, except in two cases, a severe conjunctivitis, both of which cleared up in a few days without treatment.

The prognosis must always be guarded. In the acute form, in young subjects, with secondary infection, it is extremely grave, but in the more latent forms where the general condition is good and the cooperation of the patient is to be had, many cases live long and comfortable lives before the renal condition gives much trouble.

In the treatment of this disease the pendulum has, in recent years, gone extremely far in the direction of operative interference, but, I am glad to say, is settling to a sane and conservative middle point.

This form of tuberculosis requires about the same treatment as the disease in other parts. Outdoor life, proper feeding—in a word, proper hygiene in the fullest sense. Medicines, as a rule, do no good and should not be given, except when clearly indicated to meet some well-defined condition. As they are liable to disturb digestion, they are capable of much harm.

Tuberculin given in extremely small dosage and at long enough intervals is often useful. The writer has seen some very pleasant results from this treatment. It must be remembered that this is a two-edged sword and too much caution can not be taken in its administration.

So far as surgical measures are concerned, they are, of course, indicated in those conditions where drainage through the natural route is insufficient, where pyonephrosis or perinephritic abscess exists. The choice of operation depends upon the condition found, either drainage or enucleation of the organ, provided the other kidney is intact.

INDIANA PHYSICIANS AT A. M. A. SESSION

INDIANA sent quite a delegation of physicians to the Atlantic City session of the American Medical Association. The names of those who registered are as follows:

Allen, H. R..... Indianapolis
Barnett, Charles E..... Fort Wayne

Barnhill, John F.....	Indianapolis
Bear, Lowery H.....	Vevay
Bland, Curtis	Greensburg
Boyer, J. S.....	Decatur
Bolling, Lewis A.....	Attica
Bower, George B. M.....	Fort Wayne
Bulson, Jr., Albert E.....	Fort Wayne
Cline, L. C.....	Indianapolis
Combs, George W.....	Indianapolis
Cook, Charles P.....	New Albany
Daugherty, Charles A.....	South Bend
Dickes, John T.....	Portland
Dowden, C. W.....	West Baden
Egolf, H. M.....	Liberty
Endman, Bernhard	Indianapolis
Foxworthy, Frank W.....	Indianapolis
Fleming, J. C.....	Elkhart
Freeman, Edward D.....	Osgood
Gerrish, M. F.....	Seymour
Graham, Alois B.....	Indianapolis
Harris, C. E.....	Bloomington
Hoffman, G. E.....	Logansport
Holder, R. E.....	Columbus
Hurtz, J. N.....	Indianapolis
Kahlo, George D.....	French Lick Springs
Keiper, George F.....	La Fayette
Kennedy, T. C.....	Shelbyville
Kimberlin, A. C.....	Indianapolis
King, J. E.....	Richmond
Knabe, Helene	Indianapolis
Kyle, John J.....	Indianapolis
Layman, D. W.....	Indianapolis
Leach, W. J.....	New Albany
Libbert, Edward J.....	Aurora
May, A.....	Crothersville
Mattison, James A.....	Marion
Mattix, Ernest L.....	Terre Haute
Mentzer, S. E.....	Monroeville
McKinney, J. W.....	Bluffton
McOscar, Edward J.....	Fort Wayne
Miller, Charles E.....	Muncie
Morrison, Frank A.....	Indianapolis
Myers, Isaac N.....	Maples
Newcomer, M. V. B.....	Tipton
Northrup, A. H.....	Markle
Norton, F. D.....	Columbus
Norton, William J.....	Hope
Pantzer, Hugo O.....	Indianapolis
Porter, Miles F.....	Fort Wayne
Potter, Theodore	Indianapolis
Rietz, Paul C.....	Evansville
Ross, David	Indianapolis
Sharp, Harry G.....	Indianapolis
Shimer, Will	Wanamaker
Smith, G. H.....	Knightstown
Spink, Mary A.....	Indianapolis
Stevenson, David W.....	Richmond
Thompson, G. W.....	Winamac
Tomlin, William S.....	Indianapolis
Viehle, Carl G.....	Evansville
Walker, Edwin	Evansville
Ward, John P.....	Vevay
Wilson, James	Wabash
Wishard, William N.....	Indianapolis
Woollen, Green V.....	Indianapolis
Wynn, Frank B.....	Indianapolis
Yocom, M. G.....	Mentone

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EDITORIALS

DANGERS AND FALLACIES OF THE
 LOCAL TUBERCULIN TESTS.

Another warning note concerning both the possible untoward effects and the unreliability of the various methods of applying tuberculin locally for diagnostic purposes is sounded by Rayevsky in *The Journal of the American Medical Association* of June 26, 1909.

After mentioning the joy with which the advent of the von Pirquet, Calmette and Moro tests was hailed by the profession, as substitutes for, or preliminaries to the subcutaneous injection of T. O., the author details two cases under his own observation where severe constitutional reactions were accompanied by "focal reactions" incident to the application of the von Pirquet test. (By "focal reactions" the author refers to specific reactions occurring in the foci of disease, in one of these cases the lesion being in the chest, in the other the larynx. Evidently no local reaction at the site of application of the test took place in either case.)

The first case was that of a bookkeeper, 27 years old, with a bad family history, but presenting no positive physical or sputum findings upon repeated examinations. Pulse 84, temperature 98.2 to 98.6, taken for three days. In the evening following the careful application, at noon, of the von Pirquet test, the patient complained of an uncomfortable feeling in the chest; coughed; temperature rose to 100.4; pulse 96; the fever disappearing about nineteen hours after the application of the test, but the patient remained somewhat tired the next morning. The right apex showed harsh breathing and the sputum, previously negative, showed tubercle bacilli in Nos. 1 to 3 in every third or fourth field, thirty fields being examined.

The second patient was a married woman, aged 35, with a positive family history as to tuberculosis. She had been suffering from suspicious symptoms of laryngeal tuberculosis for some three months, although at the time of ex-

amination the laryngoscope showed only a slight pallor of the tissues. Chest and sputum examination for tubercle bacilli negative, but with numerous pus organisms in sputum. Temperature for three days 98 to 98.6, pulse 108. Eight hours after the application of the von Pirquet test the patient became cyanotic, confined to bed, suffered with nausea, vomiting, hoarseness, oppressiveness in the chest, dysphagia, coughing and increased expectoration. Pulse 140, temperature 102.6. Moist râles in right apex. Laryngoscopic examination made eighteen hours after inoculation revealed hyperemic, bluish spots resembling papillæ over epiglottis and right rima glottidis. Temperature rose to 104 within 24 hours, then declined rapidly.

It would certainly seem from the clinical pictures that there occurred in these two cases a specific, constitutional reaction from the tuberculin absorbed through the scarification wound, despite the fact that care was taken to prevent any extravasation of blood. Perhaps the process is not unlike that frequently following vaccination against smallpox, which instances of systemic reaction we have all observed. Rayevsky thinks that we should not be surprised at this reaction when we consider that in the von Pirquet test there would be administered, if it were all absorbed, 15 mg. of T. O., which is certainly an enormous initial dose of tuberculin. Indeed, if only a half or a fourth of this quantity ultimately found its way into circulation, the dose would be far too large.

The interesting question is also raised by the author as to just what the effect of the tuberculin on the skin really is—whether the reddened area around the site of inoculation has anything in common with the specific tuberculin reaction, or whether it does not act merely as an irritant to a peculiarly sensitive skin, in which latter case non-tuberculous individuals might readily possess skins which were sensitive to tuberculin. Indeed Bandelier and Roepke are quoted to the effect that, by the use of the von Pirquet test, sixteen per cent. of non-tuberculous children will show a typical skin-reaction, while non-tuberculous adults and larger children almost always react slightly.

So that, granting a certain true significance to the cutaneous reaction, there are always the possibility of a peculiarly sensitive skin in a non-tuberculous person and the danger of a violent constitutional reaction from a dose too large and not accurately measurable. Like dangers and fallacies attach to the ophthalmic and inunction tests to a greater or less degree. When we con-

sider the marked sensitiveness and great absorbent powers of the conjunctiva, the wonder is that we do not have more serious local lesions, such as corneal ulcerations and, indeed, totally blind eyes, than the relatively few that have so far been reported. Not but that enough and more untoward results from the Calmette test have occurred, for the loss of a single eye consequent upon the properly conducted test should be enough to condemn it.

If, in the future, instances become common wherein both "focal" and constitutional reactions are set up where only local ones are sought, these cutaneous tests will be robbed of their one redeeming feature—viz., that of not making the patient sick or endangering him by rendering active some latent lesion. As to exactness of dosage there can be no more comparison between these methods and the subcutaneous one than could be drawn between the oral, rectal or inunction and the hypodermic methods of medication.

PRESENT STATUS OF TRYPSIN IN CANCER TREATMENT.

In the June, 1909, number of *Progressive Medicine* Clark gives a very interesting résumé of the more recent results from the use of trypsin in the treatment of inoperable and recurrent carcinoma, which would certainly indicate that, whereas the tryptic enzyme of the pancreas does seem to have a selective action on the cancer cells with which it is in direct contact, no such destructive action is exerted on the deep-seated lesions. He reviews in some detail a series of articles by Graves¹ in which is outlined Beard's fascinating theory of the rationale of the trypsin treatment of cancer. Starting with the development of the chorion from the union of the ovum and the spermatozoon, the trophoblastic or pre-embryonic stage is reacted, in which a number of spores are found, destined to become true embryos, but, in man, only one of which becomes a true embryo, the rest aborting or remaining as retrogressive cells in the complete embryo. Triplets, twins, double monsters, teratoma, mixed tumors, or down to pure carcinoma or sarcoma are thus considered as phenomena entirely dependent upon the completeness of development of more than one spore. Thus the cancer cell is the lowest stage of germ-cell development, or the "irresponsible trophoblast" of Beard, the chorio-epithelioma being the prototype of all malignant tumors between which there is no essential difference. That a certain organ is the seat of a cancer is merely the circumstance of the

abnormal germ cell happening to take up its abode therein and its attempt at irritation of the cells of its environment. Beard also reasoned that, inasmuch as the chorion begins to degenerate at about the same time that the weak pancreas of the embryo begins to functionate in the seventh week, the absence of the embryo, and consequently its pancreas, allows the chorion to continue in its progress toward malignancy. Blumenthal, Newberg and others have shown pretty conclusively that trypsin may readily dissolve cancer cells.

Graves' own investigations on a series of six cases of recurrent carcinoma treated by trypsin led him to conclude that the outlook for cure was decidedly unfavorable, as in every one of the six cases there was a gradual, inevitable progress of the disease, four having died and two undoubtedly will die in a few months. Circumscribed, recurrent nodules were, however, amenable to the direct action of the trypsin introduced locally and later showed microscopically the remains of destroyed cancer cells in an environment of an intact and healthy connective tissue.

Von Leyden likewise concluded from his experience that, although trypsin had a curative influence on cancer, the method of successfully applying it had not yet been discovered.

Pinkus does not deny the local destructive action of trypsin on cancer cells, but the question of cure will only be known after the use of the agent in a large number of cases and over a prolonged time. From his experience with the use of trypsin in ten cases of cancer of the digestive organs Weinstein concludes that the method is a total failure.

An editorial in the *British Medical Journal* of Jan. 11, 1908, points out that not only have the claims of Saleeby been substantial, but it casts doubt upon those cases for which the author (Saleeby) claims cure or benefit.

Cronin, on the other hand, in *The Journal of the American Medical Association* for June 26, 1909, reports the case of a cachectic individual who four months following a radical mastectomy underwent ten months' trypsin treatment with apparent improvement in her general condition. In all probability this is another instance of a temporary subsidence, and it certainly is too short a time for any claim to cure.

The experience of Graves, Weinstein and others is in accord with that of the writer of this editorial, who has met with a total failure in the three cases upon which he has tried the treatment, two of the cases being recurrences following radical mastectomies and the other a cancer of the jaw which had resisted all other treatment, operative and otherwise.

1. Boston Medical Journal, January to June, 1908.

So that from the evidence at hand we can not as yet hope for any selective, constitutional action from this or any other non-operative measure in deep-seated malignancy, although a temporary, palliative effect may be experienced in some cases.

EDITORIAL NOTES

THE next session of the A. M. A. will be held at St. Louis Mo.

BEGINNING with 1909 the Indiana University School of Medicine will require one year in a college of liberal arts as an entrance requirement, and beginning with 1910 the entrance requirement will be increased to two or more years in a college of liberal arts.

THE membership of the American Medical Association was 33,935 on May 1, 1909, making a net gain for the year of 2,592. This is an increase in the past ten years of 25,938 members, or an average growth of approximately 2,600 per year. During the same time the Indiana State Medical Association has practically doubled its membership, having at the present time 2,627 members.

THE American Medical Association has appropriated the sum of \$5,000 for the purpose of creating a suitable memorial to Dr. N. S. Davis, the founder of the Association, provided that within three years an additional amount of \$20,000 be collected for this purpose, and provided also that the form of the memorial be approved by the House of Delegates of the Association.

WE ARE advised that the committee on arrangements of the Indiana State Medical Association has secured Dr. Joseph Collins, of New York, as the guest of the association at the Terre Haute session. Dr. Collins will deliver an address before the general session on Friday morning. President Kahlo's address will be delivered Thursday evening, following which the committee on arrangements has arranged for a theatrical performance and a boat ride.

THE move to grant former Secretary Atkinson a pension from the funds of the A. M. A. met with defeat at Atlantic City. We believe that this is right, for it would be bad policy for the

Association to establish a precedent which might prove very embarrassing in future years. Dr. Atkinson certainly deserves assistance at the hands of the medical profession, but such assistance should come from physicians individually or collectively, but not through an organization which should avoid the establishment of bad precedents.

THOSE who have envied E. H. Harriman, the millionaire railroad magnate, his position and wealth, may now think "Is the game worth the candle?" Mr. Harriman has for many years severely taxed his physical and mental energies in the mad scramble to secure control of a large part of the railroad interests of this country and to become the possessor of wealth running into many millions. He is now paying the penalty, for he is at present going from one watering place to another in Europe and following the advice of noted specialists in an effort to regain his health, which, according to common report, is in a serious state in consequence of overwork. Wealth and position may be worth working for, but not when its acquirement necessitates a sacrifice of health and happiness.

EVERY reputable practicing physician should read the report of the proceedings of the House of Delegates of the American Medical Association printed in *The Journal of the American Medical Association* June 19. Nothing can give a more concise yet comprehensive idea of what medical organization is accomplishing for the medical profession and the public at large. If the report is carefully read and properly digested there will be less criticism of those who have devoted time and thought to Association work at great personal sacrifice, and less opposition to the policies of the Association. As we have before stated, much of the opposition to the workers in the American Medical Association and the policies of the Association has arisen through ignorance and been incited by those who had personal ends to serve.

THOSE who have been complaining because the A. M. A. has accumulated a surplus will perhaps understand the value of having money in the treasury when they read the trustees' report and learn that the funds of the Association are being conserved for use in erecting a much needed addition to the Association building in Chicago. Additional space is needed in practically every department of the Association offices, and the trustees are unanimously of the

opinion that the only solution of the question is the erection of a new building large enough not only to take care of present needs but to allow for growth for many years to come. The Association already owns the ground adjoining the present building, and the available funds and securities will permit the construction and equipment of such a building as proposed, which is estimated will cost approximately \$200,000.

At the Atlantic City session of the A. M. A. the following officers were elected:

President—Dr. William H. Welch, Baltimore, Md.

First Vice-President—Dr. Robert Wilson, Charleston, S. C.

Second Vice-President—Dr. Charles J. Kipp, Newark, N. J.

Third Vice-President—Dr. Alexander Lambert, New York City.

Fourth Vice-President—Dr. Stanley P. Black, Pasadena, Cal.

General Secretary—Dr. George H. Simmons, Chicago, Ill.

Treasurer—Dr. Frank Billings, Chicago, Ill.

Trustees—Dr. C. E. Cantrell, Texas (one year, to fill vacancy caused by death of Dr. Happel); Dr. M. L. Harris, Chicago, Ill.; Dr. C. A. Daugherty, South Bend, Ind.; Dr. William T. Councilman, Boston, Mass.

THE Department of Health of Fort Wayne, Ind., is furnishing gratuitously to physicians and midwives an outfit for use in preventing ophthalmia neonatorum. The outfit consists of a small vial of 1 per cent. nitrate of silver solution and a sterilized medicine dropper, with instructions for use in preventing ophthalmia in the newborn. It is intended that each physician may have one of these outfits in his obstetrical bag, and duplicate outfits may be obtained free upon requisition upon the Department of Health of the city of Fort Wayne. This is a step in the right direction and one that should be followed by county and city boards of health all over the state. The only way in which it is possible to lessen the number of cases of blindness or impaired vision due to ophthalmia neonatorum is to prevent the disease, and the proper way to prevent the disease is by the use of Crede's method, consisting of the application of 1 per cent. to 2 per cent. nitrate solution, into the eyes of the newborn. If every health board in the state of Indiana will follow the example of the Department of Public Health of the city of Fort

Wayne and distribute gratuitously outfits and instructions for the prevention of ophthalmia neonatorum it will be possible to entirely do away with the damages which occur from this destructive disease.

THE A. M. A., at the Atlantic City session, passed the following resolutions concerning education of the public in preventive medicine:

WHEREAS, The American Medical Association, not only as one of its declared purposes, but by numerous lines of activity, many of them connected with the Section on Hygiene and Sanitary Science, stands committed to the education of the public with respect to the nature and prevention of disease, and

WHEREAS, The demand for such popular education with respect to tuberculosis, cancer, typhoid fever and other decimating diseases has become urgent; therefore be it

Resolved, That all county, district and other local medical societies be and they are hereby requested to hold annually one or more open meetings to which the public shall be invited and which shall be devoted to a discussion of the nature and prevention of disease and to the general hygienic welfare of the people.

Resolved, That the women physicians, members of the American Medical Association, be and they are hereby requested to take the initiative individually in their respective associations in the organization of educational committees to act through women's clubs, mothers' associations, and other similar bodies, for the dissemination of accurate information touching these subjects among the people and that they be requested to submit to the House of Delegates a yearly report of such work, and elect from among their number a committee to take charge of the same

THE A. M. A. council on defense of medical research has planned a series of papers, by experts, on the importance of animals in the development of various phases of medical science and practice, to be published primarily in the *Journal of the American Medical Association*, with the hope that thus a body of evidence will be secured which physicians can refer to in case agitation arises in their communities. It is probable that these papers will be reprinted in book form, or as pamphlets, and either placed on sale or distributed in regions where agitation is active. The series includes the principles of serum therapy, diphtheria and tetanus, meningitis, rabies, smallpox, dysentery and cholera and typhoid fever, plague, tuberculosis, syphilis, tropical protozoan diseases, diseases caused by metazoan parasites, disturbances of internal secretions, the

physiology of the circulation, pharmacology, venoms and antivenins, two papers on experimental surgery—surgery technie and aseptic surgery—cancer research, hygiene and sanitary science, including the diagnosis and control of contagious diseases, the economic importance of diseases which have been lessened by animal experimentation, the use of animals in cattle bureaus, the experience of animals in laboratories, the ethics of animal experimentation, the educational value of operation on animals, and the more complex inter-relations of research and practice. The first paper of the series will be published in an early number of THE JOURNAL.

THE A. M. A. committee on medical legislation makes the following report concerning legislation enacted in Indiana by the last legislature: 1. Anti-stream pollution act to prevent the introduction of impurities into the public streams of the state and conferring on the state board of health certain powers to enforce its provisions for the protection of the public health. 2. Housing bill, regulating the construction and maintenance of tenements, lodging and apartment houses. This applies only to Indianapolis and Evansville. 3. Amendment to the state health law, defining the powers and duties of the state board of health, etc., and giving all boards of health "power to do what is reasonable and necessary for the prevention and suppression of disease and the protection of the public health." 4. Act regulating bakeries, canneries, packing houses, slaughter houses and all establishments in which food of any kind is stored or produced, also regulating the method of preparation of food products, etc. 5. A law regulating the management of county jails and providing for their sanitary conduct. 6. An act requiring steam railroads to equip trains with medical supplies. 7. An act authorizing the trustees of the Indiana State University to conduct a medical school. 8. An act protecting natural, mineral and medicinal springs of the state and preventing waste, pollution, etc. 9. An act appropriating \$135,000 for a state tuberculosis hospital. 10. An act providing for medical inspection of school children. 11. An act providing for the establishment of a hospital for insane criminals. The usual appropriation bills were also passed, with an increase of the amount appropriated for the use of the state board of health. Public health matters in Indiana are in a most excellent condition and the coöperation existing between the state board of health, the State Medical Association and various committees on medical legislation is intimate and satisfactory.

THE city of Fort Wayne has for many years been infested with several varieties of quack doctors and they have all flourished. If one quack doctor leaves the city another drops in to fill his place. Just how each and every one gains a license to practice (if he has one) may perhaps be explained by the State Board of Medical Registration and Examination, a member of which board resides in Fort Wayne and is familiar with the situation. Recently a medical faker of the worst type, advertising himself as "Phenomenal Francis," drifted into Fort Wayne, and, without the formality of securing a license to practice medicine, proceeded to delude the sick and suffering in a manner which puts all ordinary imposters to shame. By means of a band and cheap minstrel entertainment the "Phenomenal Francis" each night rounds up the herd of suckers to his tent, where miraculous cures are performed on a brilliantly lighted stage. The real sandbagging takes place later at the officees where "Phenomenal Francis" poses as the guiding spirit in a firm known as "The Hot Springs Doetors." One of the newspapers of Fort Wayne has the following to say of "Phenomenal Francis" and his methods: "His circussy performances, his preposterous claims, his mountebank characteristics, his fraudulent methods, his untruthful assertions and his general, all-around makeup should mark him at once for what he is, and those who run and even the blind should see that his every action spells imposter. But they will not see or do not want to see, and the flood of money continues, the game of imposition is uninterrupted."

Of course the game of imposition is uninterrupted, for "Phenomenal Francis" is a slick medical faker and almost any medical faker can operate in Indiana unmolested. But let some reputable doctor, a graduate of any one of our best medical colleges, commence the practice of medicine in Indiana without the formality of procuring a license and the Board of Medical Registration and Examination would, directly or indirectly, very promptly cause his arrest. Now the question arises, If "Phenomenal Francis" and other medical fakers of his stripe can practice medicine in Indiana as they do now, of what use is the medical practice act in protecting the people?

DR. C. NORMAN HOWARD is the capable and energetic secretary of the Kosciusko County Medical Society. We have often said that a secretary can either make or break his organization, and this applies particularly to medical societies. Dr. Howard has succeeded in not only

increasing the membership but the character of work done by his county medical society. It requires a little time, labor and thought to build up a society, but the object is worth the effort. We know there are many other good county secretaries in Indiana, but the poor ones are in the majority, and for the benefit of the poor ones who may not know just how to go to work we are herewith reproducing one of the letters which Dr. Howard has recently sent to the members of the Kosciusko County Medical Society. The letter indicates how Dr. Howard works to secure interest and enthusiasm in the county society, and there may be some suggestions worthy of adoption by other county secretaries, and we therefore reproduce the letter, which is as follows:

Dear Doctor:— You especially can easily do a very helpful part in this forward movement for a still better society.

How? By simply writing what you think will improve the society and mailing it in the enclosed stamped envelope. Write anything you want—just so you believe it.

Do you want a different kind of a program? The chairman of the program committee tells me he will be glad for suggestions.

Do you want a greater number of speakers, less number of speakers; longer talks, shorter talks; a fine for those who are on the program for papers or discussion and do not come; change of time of meeting; less number of meetings in the year, more meetings; something to eat and smoke every time, sometimes, not at all; outside speakers; meetings for the public in which the latter could get a clear idea of our ideals and what medical men are doing and hope to do; a half day's outing for the members with their wives and children.

The above are simply illustrations. Suggest anything in which you believe.

If you have any knocks send them along, too.

I particularly want you to suggest the things which interest you—which would make you feel like coming. Don't suggest the things which you think might please some other fellow. He will get his chance. We want to know the things which will make you *hitch up and come, even if it is a bother and you lose a dollar temporarily.*

I believe the reason the society has been booming so in the last year has been because you and others were willing to make some extra sacrifice of time and money.

Have not the results fully compensated you? As you know, all the old debts are now wiped out, we are paying for programs, stationery, stamps, etc., as we go along, and we have right now a snug little nucleus of a bank account. We don't owe anybody a cent and we are all working together. We are having good meetings the whole year round. The society is alive. The society is strong.

This letter, therefore, is not being written because the society is not a good one as it stands, but because you do not want it to simply stand when it should be moving forward.

Why not make it the best society in the state while we are at it? We want to keep pushing and moving and stirring and increasing the good fellowship; in-

creasing our theoretical and practical knowledge of all that pertains to our profession; increasing our interest in the ethics and higher ideals of medicine; increasing our interest, our kindness of thought, and even admiration for the physician who is working alongside of us and who mayhap is even a better man than we. All of these things, and more, a good society can and does do for its members.

Because we are going to take another step forward, the society needs a little more of your good judgment, a little more of your good will, and, most of all, the society needs a little of your time each month. *It does not need your money.*

The first thing is for you to say just what would increase your interest in the meetings. Please mail it to-day.

The second thing is for you to be at the meeting, with the other busy men of the county, on the last Tuesday of this month.

THE report of the Board of Trustees of the American Medical Association, given at the Atlantic City session, calls attention to the fact that "few members of the Association realize the great amount of time, energy and work which the gentlemen who are serving gratuitously on the various committees of the A. M. A. are constantly giving for the improvement and benefit of the profession as a whole and the community at large. The manner in which the committee of today *acts* and does things is in marked contrast to the manner in which the committee of a few years ago resolved and did nothing, and it is this spirit or desire to do something for the benefit of all that is one of the most encouraging features of our present organization . . . One of the most important committees is the Council on Pharmacy and Chemistry. The results accomplished by the labors of the council have been made possible by the fact that the work, which could not have been bought with money, has been done largely gratuitously by men of the highest scientific attainments and imbued with a purely altruistic spirit. The work done by this council has been enormous and the good results are far-reaching in the highest degree. The council is constantly examining a large number of preparations with which the profession is being exploited, and weeding out the frauds and fakes so that the physician today need not be deceived by false representations of agents into using or administering anything with which he is not entirely familiar. Many of these fraudulent preparations are put on the market by so-called chemical houses which exist as such only on paper and which are organized for the sole purpose of "working" the profession or the people, usually both, with the particular fraud in question. Were the exposure of these frauds the only work done by the council it would still be invaluable, as it

is a means of accomplishing that which heretofore had been practically impossible. But this, after all, is but a minor part of the council's work. There are many preparations and products placed on the market with honest intent and purpose by perfectly reputable houses which, on thorough investigation by the council, are found either to be below standard or to fall below the claims conscientiously made for them by the manufacturers. On presentation to the manufacturers the results of the investigations by the council many of these preparations and products are modified or more carefully standardized, or the claims made to conform more carefully to the facts, or the preparations are taken off the market, so that not only physicians but the people as a whole are constantly being benefited to a degree not realized.

"In addition to the great amount of work done by the several members of the council in their respective laboratories the Association, as is well known, has a laboratory of its own in THE JOURNAL building, under the direct supervision of Professor Puckner, where analyses of all kinds of preparations are constantly being made. The work here has grown so rapidly and has reached such proportions that the trustees recently authorized the employment of another chemist to help carry it on. It is impossible to overestimate the value of this work. The physician is now no longer dependent on the exaggerated, extravagant, and often untruthful and absurd statements of the advertising agent for his knowledge concerning new products and preparations, but may obtain information from a trustworthy source, which has no other aim than to make known the facts in the case. The excellent work of this council has received general recognition, both at home and abroad. It has aroused the medical profession of Germany, which is beginning to take cognizance of conditions which were not realized until this work was commenced, and in the German journals acknowledgments are repeatedly made of the work that is being done on this side."

In concluding the report of the A. M. A. the Board of Trustees call attention to the fact that "the Atlantic City session marked the close of the most remarkable decade in the history of the organization. For fifty years previous to this period the Association had struggled along, making good resolutions from year to year, but accomplishing only a very small part of the great end and aims of its existence. THE JOURNAL, with a circulation of only a little over 10,000,

had little standing as a scientific periodical and was seldom quoted by the great journals of the world. The assets of the Association were nominal, and it was without a fixed home. The profession throughout the land was in an incoherent, unorganized state, an easy, helpless prey to the most glaring impositions and frauds. The various committees appointed by the Association rarely if ever met, except perhaps at the annual meeting, and then generally only to draw up a hasty resolution which resulted in nothing being done. But with the beginning of the past decade a new life came into the organization. THE JOURNAL began to make most remarkable strides forward. Its circulation in the ten years increased 500 per cent. It reaches every quarter of the globe and stands without a peer as an educator in all things scientific, political, sociological and medicolegal which in any way relate to the work. It has erected, enlarged and outgrown one of the finest medical printing plants in the world, and the Association's assets extend into the hundreds of thousands.

"The Association, through its active committees, has made a most comprehensive study of medical education in this country and accomplished most positive results in elevating and standardizing the same. It has made itself felt in national legislation and aided in the molding of laws to just and righteous ends. It has laid bare innumerable frauds and made it impossible for them to be longer unknowingly perpetrated on the profession and the people. It is educating the masses in general matters pertaining to medicine through its Bureau of Public Instruction; it is stimulating scientific investigations by means of rewards for original medical research and commendable scientific exhibits. Through its initiation the profession of the United States has been reorganized, or rather organized, into an intelligent, coherent body which has come to learn its rights, to know its power and to feel its duties and obligations. All of this and much more has been accomplished in the brief period of ten years, and your trustees feel that they would be derelict in their duty did they not add with pride and sentiments of regard that the one man above all others to whom we are indebted for these great things is our present Editor and General Manager, Dr. George H. Simmons.

"As was to be expected when the Council on Pharmacy and Chemistry began the work of exposing the medical frauds and fakes that for years had been foisted on an unsuspecting profession and an innocent public, it brought down on itself and the Association a torrent of ridicule

and abuse from the proprietary and patent medicine interests that were so severely hit by the exposure of their dishonest products. For three years these interests kept up against the Association and its officers a fusilade of the most scurrilous invective and of obloquy which money could buy. But all to no effect. The officers of the Association were firm in the belief that the vast majority of the physicians were at all times for right, and the good work continued uninfluenced in the slightest by these railings. Failing ignorantly of their purpose in these attacks, and finding that the Association continued to grow in numbers and strength from day to day, the method of attack has changed recently. Instead of hurling the forces against the Association and its general officers a most malicious and vindictive attack has been made on the honor and personal character of one who has formed the central figure of our organization for the past ten years. The animus back of this attack and the interests that are aiding and abetting it are not difficult to understand, but it will be found that this attack, like those of the past, will be shattered on the impregnable rock of a great work well done, and it will but show that the American Medical Association is founded on the righteous integrity of the great body of physicians throughout this land and that it will endure."

DR. FRANK B. WYNN, of Indianapolis, chairman of the committee on scientific exhibits of the A. M. A., deserves special commendation for the splendid work he has done in making the scientific exhibit of the Association one of the most valuable and important features of the Association work. The scientific exhibit under his guidance has become as much a part of the permanent work of the Association as the work of the sections. Dr. Wynn well says: "Appeal to the human eye in the commercial world has always been the chief means of attracting those who have money to spend. Artistic arrangement of articles in shop windows and show cases always acts suggestively to a prospective purchaser. This really is the exhibit idea. It has been elaborated in modern times in expositions, fairs, and the like. The modern commercial world likewise appeals with extraordinary effect to the public through advertising. Inartistic but striking advertisements stare us in the face as we travel, glare at us in the street car, and distract our attention from readable matter in the daily paper, so that, whether we will or not, we become familiar with Peruna, Quaker Oats, and Bull Durham Tobacco.

"It seems strange, indeed, that this principle should not have been more generally applied in the dissemination of educational knowledge among the people. To be sure, in the modern methods of higher education the museum and laboratory have played a conspicuous part. Growing out of this phase of educational work have arisen scientific exhibits, in the inauguration of which this organization has done pioneer service.

"In the further evolution of this tendency, health boards and various public health organizations have instituted exhibits for the enlightenment of the people on sanitary and public health questions.

"Tuberculosis has received widest attention. While excellent, most exhibits have been spasmodic and sporadic. They have been expensive and cumbersome to manage. Maintained for only a few days, but a small proportion of people ever see them. The need is for some means of constantly keeping before the eyes of laymen the tuberculosis problem in all its aspects; to make plain, as Dr. Osler has recently emphasized, that it is a people's problem. Of course, the issuance of propaganda by health authorities, societies and popular lectures relating to the question have greatly enlightened the public mind. But again there is the lack of continuity in the work and the failure to reach the great mass of the people.

"To your committee it has seemed that there is a demand for a compact but complete tuberculosis exhibit, housed in a substantial case, and suited to permanent installation in public libraries, postoffices, railway stations, etc. A year ago the committee offered a medal, with the hope of developing a model exhibit adapted to this end. No exhibit was presented which was considered sufficiently meritorious to receive the award. The same offer has been repeated this year.

"The exhibit idea is capable of great elaboration and practical application in teaching the people the lessons of hygiene and sanitary science. It is a phase of original practical work, to which your committee has given earnest thought, and which it is hoped to supplement by fruitful results. Public health exhibits are certain to play an important rôle in the march of preventive medicine. They are a type of advertising in the interest of the public weal.

"The committee, in seeking to stimulate their development, is exceedingly anxious that they should be along sane and judicious lines. On the one hand, they should be attractive, if they are to catch the eye of the public; but, on the other hand, they should be dignified, else they will

not command the respect of the intelligent and prudent. They should make very plain the great truths it is desired to bring home to the people; they should contain sufficient science to convince the lay mind of the truths which it is sought to inculcate, but not enough to cloy the enthusiasm or direct attention from the great practical lessons.

"Your committee feels that in the field of preventive medicine this Association has a great opportunity—in fact, a duty—to properly poised and direct the evolution of exhibits designed for the enlightenment of the public on sanitary and hygienic questions. Toward the attainment of these ends your aid and coöperation are asked."

DEATHS

DR. J. L. ADAMS, aged 63 years, died at his home in Richmond on June 29.

MRS. AMANDA B. HOLLINGSWORTH, wife of Dr. R. M. Hollingsworth, of Terre Haute, died July 5.

HENRY NEBEKER, M.D., of Jefferson Medical College, Philadelphia, 1876, died at his home in Clinton, Ind., May 25, aged 63.

ROBERT B. WHITE, M.D., for nearly half a century a practitioner of Blackford County, Indiana, died at his home in Montpelier, June 1, aged 78.

WILLIAM A. ROCKAFELLOW, M.D., a graduate of the Medical College of Ohio, Cincinnati, 1879, of Laughery, Ind., died in Hartford, Ind., April 27, from typhoid fever, aged 53.

GEORGE R. REPP, M.D. (Central College of Physicians and Surgeons, Indianapolis, 1890), of Tipton, Ind., died suddenly in his office in that city, June 4.

ASHLEY R. McCULLOUGH, M.D. (Hahnemann Medical College of the Pacific, San Francisco, 1897), died at his home in Williamsport, Ind., June 6, aged 51.

MRS. SARAH WEIST, widow of Dr. Jacob R. Weist, of Richmond, died July 5 in New York City, where she had gone to visit her son, Dr. Harry H. Weist.

JAMES A. PINSON, M.D., a veteran of the Civil war and member of the medical pension examining board, died at Terre Haute, June 22, at the age of 72. His father was in the Mexican war and his grandfather in the war of 1812.

EMERY JONES, M.D., of Knightstown, Ind., died in Manila, Philippine Islands, from smallpox, April 6, and his ashes were returned to Knightstown. Dr. Jones was sick only 448 hours, and it was his dying request that his body be cremated and the remains sent to his old home. He was 31 years old.

DR. W. J. FAIRFIELD, who a year ago moved from Anderson to Delta, Colo., was drowned in the Gunnison River of Colorado on June 25. Dr. Fairfield was 55 years old and for many years was a prominent member of the local medical society at Anderson and the Indiana State Medical Association. He is survived by his widow and one son.

RICHARD E. HAUGHTON, M.D., the oldest practicing physician in Richmond, Ind., died June 4, 1909, at the age of 81 years, after an illness of practically seventeen months. Death was due to chronic bronchitis. Dr. Haughton practiced medicine in Richmond for nearly 39 years, as well as practicing in Indianapolis and Texas, making his total years of activity in the medical profession nearly 60. After becoming of age Dr. Haughton studied medicine under the instruction of his father, and assisted him in his practice for a time. When his father was given a position in the old Quaker Boarding School, which is now Earlham College, he was succeeded by his son as instructor in the Union County Seminary. After 25 years of practice he was invited in 1873 to become associated with the Indiana Medical College, at Indianapolis, where he was professor of surgical pathology and clinical and operative surgery. Later he, with W. S. Haymond, started the Central Medical College of Indianapolis for the instruction of physicians and surgeons. Dr. Haughton was one of the oldest members of the Indiana State Medical Association, of which he was elected president in 1874. Other societies to which he belonged are Union District, Tri-State, Wayne County, and Ohio State Medical Associations.

PERSONALS

DR. HARRY ELLIOTT moved July 1 from Poland to Brazil.

DR. A. F. TULLEY, of Brazil, is spending the summer at the "Norways."

DR. EDGAR F. KISER, superintendent of the City Dispensary, Indianapolis, has resigned.

DR. HARRY N. SWEZEY has been made a member of the board of public works of Marion.

DR. T. B. NOBLE, of Indianapolis, passed his vacation in catching fish in the lakes of Wisconsin.

DR. J. D. SOURWINE and wife, of Brazil, are spending the summer at Macatawa Park, Mich.

DRS. C. P. COOK and W. J. LEACH, both of New Albany, are in Europe doing post-graduate work.

DR. CHARLES STOLTZ and Miss Theresa Elizabeth Judie, both of South Bend, were married June 20.

DR. CHARLES J. OVERMAN has succeeded Dr. Edwin O. Harrold, resigned, as city health officer of Marion.

DR. ELLA A. HOLLIS and Dr. W. A. Hollis, of Hartford City, are enjoying a two-months' trip to the Pacific coast.

DRS. J. H. WILLIAM MEYER and B. CARR BOWELL have resigned as members of the La Porte Board of Health.

DRS. WILLIAM F. SHARRER and WILLIAM R. QUICK have been appointed members of the board of health of Delphi.

MISS SHELLIE SMITH, daughter of Dr. J. F. Smith, of Brazil, was married June 22 to Mr. Perle H. Allen, of Terre Haute.

DR. H. J. PIERCE, of Cloverland, made an auto tour of northern Indiana and Michigan with a party of friends throughout July.

DR. LAFAYETTE PAGE and family, of Indianapolis, will pass a portion of the summer at his summer cottage on the coast of Maine.

DR. SOLOMON V. SMELSER, of Shirley, has been appointed a member of the State Board of Medical Registration and Examination.

DRS. J. N. HURTY and F. A. TUCKER, of the Indiana Board of Health, attended the Association of State Health Officers at Washington, June 3.

DR. H. C. SHARP, of Indianapolis, has been appointed a member of the Board of Control for the Reformatory at Jeffersonville by Governor Marshall.

DR. C. A. DAUGHERTY, South Bend, is now one of the trustees of the American Medical Association, having been elected at the Atlantic City session.

SIR ALEXANDER RUSSELL SIMPSON, who has held the chair of gynecology in the University of Edinburgh for thirty-five years, has been visiting in Indianapolis.

DR. TROY W. EARHART, who is in the government service in Panama; has been visiting friends in Indianapolis and Mulberry during June. He has been in Panama for the past three years since his service as interne at the City Dispensary, Indianapolis.

DR. GEORGE D. KAHLO, of French Lick, president of the Indiana State Medical Association, sailed from New York on June 29 for a three months' European trip. Dr. Kahlo expects to spend most of his time in Munich doing some work there with Professor Frederick Mueller. He will also attend the international medical congress at Buda Pest.

DR. C. B. STEMEN, of Kansas City, Kan., is reported seriously ill following an operation for strangulated hernia. Dr. Stemen was for a great many years the dean of the Fort Wayne College of Medicine and chief surgeon to the Pittsburg, Fort Wayne & Chicago Railroad (Pennsylvania Lines). He is emeritus professor of surgery in the Indiana University School of Medicine.

NEWS, NOTES AND COMMENTS

THE Council on Pharmacy and Chemistry have recently accepted Massolin (Lederle Laboratories) for inclusion with N. N. R.

The Southeastern Hospital Commission has let a contract for four additional cottages to accommodate 225 patients on the hospital grounds near Columbus for \$163,000.

DR. IONE SHULTZ, of Delphi, Ind., and Dr. E. H. Clayton, of Arkansas City, Kan., were united in marriage June 2. Both are graduates of the College of Physicians and Surgeons, Chicago, class 1908.

THE Northern Tri-State Medical Association held its thirty-sixth annual meeting at Toledo on Tuesday, July 13. A program of nine interesting papers was presented. Dr. George W. Spohn, of Elkhart, is the secretary.

THE State College Hospital, of Indianapolis, has been closed. Since the merging of the two medical schools there has been no great need for the State College Hospital, as there are ample clinical facilities at the City Hospital.

THE contract for the State Tuberculosis Hospital was awarded to the Modern Construction Company, of Terre Haute, on June 1. The work is to begin inside of fifteen days and to be completed in seven months. The site is near Rockville, Ind.

THE commencement exercises of the Indiana University School of Medicine were held at Bloomington June 23. The commencement address was given by Dr. David Starr Jordan and the degrees were conferred by the president, Dr. William L. Bryan.

DR. D. C. PEYTON, of Jeffersonville, ex-president of the Indiana State Medical Association, has been appointed by Governor Marshall as superintendent of the Indiana Reformatory to succeed W. H. Whitaker, resigned. Dr. Peyton has already assumed charge and is well fitted for this important position.

DR. ALLISON MAXWELL gave a dinner at the Woodruff Club, Indianapolis, in honor of the graduating class of the Indiana University School of Medicine just before their graduation. President Bryan presided, and the toast list included Judge Vinson Carter, Rev. C. D. O'Dell and J. K. Lilly.

THE Indiana Branch of the National Red Cross Society proposes to build open-air movable cottages near Evansville under the auspices of the Vanderburgh County Antituberculosis Association. Six cottages will be built as soon as a location can be secured. The Evansville association has promised to take charge of the colony and has pledged itself to raise the necessary funds.

THE graduating exercises of the nurses' training school of the Indianapolis City Hospital were held in that institution May 12. Of the forty-eight nurses in the school there were nine graduates. The diplomas were presented by Dr. E.

D. Clark, president of the city board of health, and the commencement address was given by Dr. Albert Hurlstone, pastor of Roberts Park Church.

THE daily papers of Indianapolis have given considerable space to the second annual convention of the Indiana Association of Suggestive Therapeutics. The president of this body is given as Dr. J. W. Beechey, Indianapolis. This society includes the Christian Scientists and the believers in drugless healing. The president, however, could not be present, on account of the death of his wife.

THE next session of the Indiana State Medical Association will be held in Terre Haute Thursday and Friday, October 7 and 8. On Wednesday evening, October 6, the Vigo County Medical Society will entertain the members of the Association only. On that evening the House of Delegates will hold its first meeting, and there will also be a meeting of officers of county societies for organization.

THE following graduates of the Indiana University School of Medicine successfully passed the competitive examination and will be assigned places as internes in the Indianapolis City Hospital and the Bobbs Free Dispensary: Dr. J. F. McCool, Dr. E. E. Holland, Dr. John I. Rinne, Dr. Charles F. Morris, Dr. John A. Marsh, Dr. Glenn E. Meyers, Dr. George F. Knue, Dr. J. E. Lankford, Dr. David P. Dumb, Dr. J. B. Thomas.

THE medical advisory board of the Methodist Hospital, Indianapolis, has organized by electing Dr. Henry Jameson president, Dr. C. B. McCulloch secretary, and Drs. W. N. Wishard and E. D. Clark advisory trustees. The other members of the board are Drs. O. G. Paff, Thomas B. Noble, Alois B. Graham, R. O. McAlexander, Frank B. Wynn, Nathan D. Woodard, A. C. Kimberlin, J. H. Oliver, Hugo Pantzer, Theodore Potter, John F. Barnhill and E. D. Clark.

THE Alumni Association of the Indiana University School of Medicine held their annual banquet at the Claypool Hotel, Indianapolis, on June 24. Dr. David Starr Jordan, president of the Leland Stanford Jr. University, spoke on the "Burbankizing of the Human Race." His remarks were interesting, unique and optimistic, and were greatly appreciated by the large audience present. Dr. John H. Oliver was toastmaster and other responses were given by Dr.

William L. Bryan, the president of the university; Dr. Clarence R. Strickland of the class of 1909, Dr. W. A. Yarling, Dr. W. O. Gross of Fort Wayne, Dr. Henry R. Alburger of Bloomington, Dr. Frederick R. Charleton of Indianapolis. The election of officers resulted in the selection of Dr. Charleton as president, Dr. Lesley Maxwell vice-president, Dr. J. Don Miller secretary and treasurer, and the reunion committee of Dr. A. C. Kimberlin, Dr. John F. Barnhill, Dr. G. L. Cunningham, all of Indianapolis, and Dr. A. G. Pohlman, of Bloomington.

MAJOR CHARLES B. LYNCH, in charge of the personal department, Surgeon General's office, U. S. A., has decided to hold a camp of militia surgeons this year. Major Lynch is endeavoring to perfect the organization of the militia medical officers, and with this end in view expects to establish a camp of instruction each year for them. Major Powell C. Fauntleroy of Fort Benjamin Harrison has been designated as the commanding officer for the camp at Sparta, Wis. The following medical officers of Indiana will leave their home stations on July 15 to proceed to Sparta, Wis., for two weeks' tour of duty at that place: Dr. Homer I. Jones, Albert Seaton, Charles B. Gutelius, John W. Sluss, John J. Boaz, Frank W. Foxworthy, all of Indianapolis; Dr. Eugene Hawkins, of Green-castle; William K. Davidson, Evansville; John M. Wallace, Franklin; Frank B. Humphreys, Angola; Larue D. Carter, Richmond; George W. Lee, Lafayette; Edison K. Gardner, Blooming-ton; Earl S. Green, Muncie; A. Golden Chittick, Frankfort, and Claud G. Cameron, dental surgeon, Indianapolis. On completion of this duty Dr. Will Mayo, of Rochester, Minn., has invited the foregoing surgeons to be present at a two days' clinic given in their honor at St. Mary's Hospital, Rochester, Minn.

SOCIETY PROCEEDINGS

ALLEN COUNTY.

FORT WAYNE MEDICAL SOCIETY.

(Meeting of May 25, 1909.)

The Fort Wayne Medical Society met in regular session in the Assembly Room, Tuesday evening, May 25, 1909, with twenty-three members present. The minutes of two previous meetings were read and approved.

Clinical Cases.—Dr. B. Van Sweringen presented an unusually large stone that had been the cause of an ileus that would have killed the patient if it had not been removed. The Doctor said that a review of the literature showed that ileus due to gallstones has been known for a number of years. He said, however, that

he knew of but one other case occurring in this neighborhood and that occurred in the practice of Dr. Porter. The stone being faceted, shows that there are more stones present. He said that he palpated the gall bladder at operation but that on account of the adhesions and the poor condition of the patient and environments for operation he decided to put off the gall bladder operation until a later date.

In the discussion Dr. McOscar said that the stone undoubtedly did not come through the duct and a veto should be put on the idea that stones this size could come through the duct. He said further that if there are any stones in the gall bladder they are not impacted there and will find their way out through the ulcerated area.

Dr. B. Van Sweringen said that he believed it possible that a stone this size could so dilate the duct by gradual growth and play as to finally be discharged through the intestinal opening. There is a case on record of a stone three-quarters of an inch in diameter obstructing the ileum. Another etiological factor in causing ileus is that the presence of stone would give a spasmodic contraction.

Dr. C. E. Barnett said it seems to him preposterous to dilate the cystic and common ducts sufficiently to allow the passage of a stone this size. The symptoms of ileus were probably due to adhesions.

Dr. C. H. English said that he thought it would be impossible for Nature to pass a stone this size through the duct.

Diabetes Mellitus was the title of a paper by Dr. R. B. McKeeman, in which he gave a résumé of the symptoms, etiological factors, etc. He thought the complications due to lowered resistance. Environment and proper mode of living are the best aids in control of the condition. Diet is of extreme importance.

In the discussion Dr. Kane said that hereditary weakness in the carbohydrate metabolism is the only thing found existing in all cases where diabetes develops. Diabetes in the young is rapid and fatal.

In organic diabetes we have almost all organs of the body at fault at various times. The treatment is a dietetic one. By use of drugs you can reduce the amount of sugar for a while but it does not last. A systematic diet is important. Food should be served on separate dishes and each portion carefully weighed. Fat forms a very valuable article of diet. Great care must be used in primary regulation of diet so that by increase in acidosis we do not get diabetic coma.

Dr. Beall said the diet of the average man is two-thirds carbohydrate, and you have to educate such an individual to live on fat. A radical change in diet should not be made all at once. Cream is best to start with in feeding fats.

Dr. Rhainy spoke on acetone and diaetic acid and said when there is danger of coma, urine is loaded with diaetic acid. If there is no acetone present there is no danger of coma. If acetone reaction is present every day then we are very apt to find diaetic acid, and coma is liable to follow. Total quantity of urine is important as also the acidity and amount of solids excreted.

Dr. Drayer said there is absolutely no drug treatment of the disease. About three-fourths of the cases treated with tryptogen die of arsenical nephritis. Diet is the only treatment. Each case is a law unto itself. Put the case on a strictly no bread diet for at least a week and it causes the disappearance of the sugar very rapidly. He said there is something in the oat-

meal diet. The ratio of the dextrin to the nitrogen will tell much as to prognosis.

Addison's Disease was the title of a paper by Dr. S. E. Mentzer, in which he said that extreme debility is the most important and most constant symptom. The chief gastric symptom is vomiting. The pigmentation makes its appearance shortly after the digestive disturbances have existed for a short time. Vertigo and fainting are frequent symptoms. The cardinal symptoms are pigmentation of skin, marked and progressive debility. Addison's disease without pigmentation may exist.

Symptomatic treatment is important under the circumstances. Especial attention should be paid to the gastrointestinal tract. Tonics, strychnine, arsenic and iron.

In the discussion Dr. Gilpin said that the consensus of opinion is that the seat of the disease is in the adrenals. Experimental enucleation has produced all the other symptoms but never the pigmentation. Pigmentation is that of a dark spot on an area of pigmentation. Pigmentation occurs on the mucous membranes.

Dr. C. E. Barnett said that if the suprarenals were close to the surface we probably would know more about them. He reported a case diagnosed as appendicitis. The patient was so weak he refused to operate at the time. He soon died. On postmortem he found extensive tuberculosis of suprarenal glands. There was no pigmentation in this case.

Dr. Drayer said: 1. Be sure there are no rudimentary glands elsewhere. Does not believe we should include in Addison's disease all neoplasms of suprarenals. 2. Should regard Addison's disease as a tuberculosis of suprarenal glands and as a distinct entity. 3. As regards pigmentation in tuberculosis of the glands, it is not a constant symptom; six in every ten cases. Tuberculosis of the adrenals is not usually associated with tuberculosis elsewhere.

Dr. Mouser said 77 per cent. of glands in Addison's disease are tubercular. The balance of cases accounted for as result of tumor, lesion of sympathetic system, etc. In many cases have accessory glands. Addison's disease is a distinct entity, caused by some lesion interfering with secretion of adrenals.

The discussion was closed by Dr. Mentzer.

Motion made and carried that by-laws be suspended and secretary cast ballot of society for Dr. F. E. Schiek.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of June 1, 1909.)

The Fort Wayne Medical Society met in regular session in the Assembly Room, Tuesday evening, June 1, 1909, with twenty-six members present.

Dr. B. Van Sweringen reported the fatal termination of the gallstone case he reported at last meeting.

Dr. Porter said that this was the second case of obstruction of the bowels by a gallstone at the ileocecal valve reported to this society.

Aspermia, Azöospermia and the Neisser Coccus was the title of a paper by Dr. C. E. Barnett. The essayist considered that even with the estimation that one out of every four healthy wives infected by gonorrhœic husbands, according to gynecologists, become sterile, that man himself played an important part in the lack of autogenesis in his not being able to deliver the sexual secretions for reproduction on account of gono-

cocce infection having passed the membranous urethra invading the sinus pocularis in the prostatic urethra, there passing through its outer walls through the prostatic ducts, to the acini; through its lateral walls infecting ejaculatory ducts and finally contaminating the seminal vesicles, vasorum ampulae and epididymis. The essayist showed seven original photographs of the pathology of the seminal tract, showing the impermeability or block that would necessarily take place from the testes out. He considered that treatment in these cases offered relief to a degree but that prostatectomy and vesiculectomy would be required sometimes to remove the seat of danger. He considered that the prevention of the distribution of the disease, rather than the production of fecundity, should be the prominent thought of the medical advisor, and that the medical man should protect the innocent healthy wife or fiancée from men contaminated with this pathology, for they were most dangerous.

In the discussion Dr. E. J. McOscar said that it was superfluous to discuss the prevention of the gonorrhœal infection of the wife. The Doctor's position is the accepted position of the enlightened profession.

Dr. Porter said that as things are now no doctor is warranted in telling the prospective bride. The male should be told frankly of his position in getting married if he is infected. In nine-tenths of the sterile marriages it is the fault of the husband. Massage of acute vesiculitis is out of the question and in chronic vesiculitis massage is dangerous.

Dr. Buchman commended the dissemination of sexual hygiene literature of the State Board of Health and gave instances of the sending out of the literature. The only way to spread this knowledge is to talk frankly.

Dr. Calvin said prevention of these conditions in the youth is the only way to meet this condition. No prostitute is free of venereal disease. Condemned the giving of certificates to prostitutes.

Dr. Havice blamed the physicians in being careless in giving advice to prospective young husbands.

Dr. Wilking spoke on the splendid results that may be accomplished by giving out the state board literature.

Dr. Weaver condemned the quack advertisements of newspapers concerning the venereal diseases and said that parents should teach their children the normal physiology of sex. There is no reason for the double moral standard of sexes.

Dr. Calvin made a motion that it was unethical for a physician to sign a certificate of health for a prostitute.

Dr. Porter said that he was insulted to be in a society that harbored men who sign certificates for prostitutes. He thought the society consisted of gentlemen, and if there were members in the society who give certificates to prostitutes either they would have to get out or he would get out.

Dr. B. Van Sweringen made a motion that a committee be appointed to investigate charges in Dr. Calvin's motion and report to the society. Motion carried.

The president appointed Drs. Porter, B. Van Sweringen, A. P. Buchman and E. J. McOscar.

Dr. Barnett closed the discussion of his paper, thanking the society for the discussion brought out.

Adjourned. E. M. VAN BUSKIRK, Sec. Pro Tem.

CARROLL COUNTY.

The Carroll County Medical Society met in the public library at Delphi, June 11, at 5 p. m. The society is using the postgraduate program, and had the fourth month's work for the June meeting.

The physicians' wives were entertained by Mrs. W. R. Quick during the business meeting, from 5 to 6:45. After the business session all went to the Presbyterian Church parlors for supper.

Dr. Chas. H. McCully, of Logansport, delivered a lecture at the Public Library at 8 p. m. to the public on "Preventable Diseases," emphasizing "The White Plague."

Adjourned.

W. R. QUICK, Sec.

ELKHART COUNTY.

The Elkhart County Medical Society met in the rooms of the Elkhart Academy of Medicine, June 3.

Prostatic Hypertrophy was the title of a paper by Dr. J. A. Work, Jr., in which he discussed the anatomy, gross and minute, physiology, embryology and pathology of the prostate gland. The two views of the etiology of prostatic hypertrophy were cited, namely, chronic inflammatory and neoplastic. Young's classification into the glandular, fibro-muscular and inflammatory varieties was mentioned, with a description of each form. Young believes from his experience that prostatic hypertrophy is commonly neoplastic and in most cases adenomatous or fibro-myo-adenomatous in form, the characteristic lesion being the formation of spheroidal tumors arising in the central group of glands. Chronic prostatitis may produce obstruction similar to true prostatic hypertrophy but never leads to true hypertrophy. Cancer rarely begins in the benign hypertrophy.

The lateral lobes along either side of the urethra are the common seat for spheroid formation, thus flattening the uretbra laterally. Later a V-shaped opening replaces the antero-posterior slit of the meatus. Enlargement of the median lobe posteriorly adds a third mound to the floor of the bladder with three corresponding sulci. In most cases the vesical sphincter lies external to the growths, seeming to show a growth into the bladder from the urethra, with the dilatation and division of the vesicle sphincter. Hypertrophy of the median lobe may similarly form a ball valve obstruction.

Enlargements of the anterior commissure practically never occur.

Discussion by Drs. Spohn, Fleming, Lemon and Work, Sr.

The Borderline Between the Medical and Surgical Treatment of Appendicitis was the title of a paper by Dr. Lemon, of Goshen. He summed up the facts as follows:

1. If attack is severe from beginning, operate as soon as diagnosis is made.
2. If symptoms are mild but have continued one or two days without ameliorating, operate.
3. If called at the beginning of the attack and there is no improvement in four to six hours, operate.
4. Cases slowly improving, if any hectic symptoms, operate at once.

Discussion by Drs. Work, Sr., Fleming, Spohn and Kuhn.

Adjourned.

ALLEN A. NORRIS, Sec.

GRANT COUNTY.

At the regular meeting of the Grant County Medical Society the retiring president, Dr. G. R. Daniel, gave a talk on "Confidence." At this meeting the treasurer made a report showing \$1,239.57 in the treasury. The annual election of officers took place at this time. President, J. A. Mattison; vice-president, J. M. Toney; secretary, O. W. McQuown; treasurer, M. T. Shively; censor, C. J. Overman.

O. W. MCQUOWN, Sec.

KOSCIUSKO COUNTY.

The June meeting of the Kosciusko County Medical Society was held on the 29th. The minutes of the previous meeting were read and approved.

Dr. E. E. Haworth, of Claypool, read a paper entitled "The Diagnosis and Treatment of Cystitis." Dr. A. C. McDonald, of Warsaw, read a paper on "The Etiology, Diagnosis and Treatment of Acute and Chronic Prostatitis." The discussion was opened by Dr. F. J. Young, of Leesburg, who was followed by Drs. C. W. Burket, T. J. Shackelford, W. L. Hines, A. C. McDonald and C. N. Howard, of Warsaw; C. R. Long, Pierceton, and C. E. Thomas, Leesburg.

President C. W. Burket and others spoke of the advantages to be derived from the hospital which is to be in Warsaw.

Dr. F. H. Foster, chairman of the program committee, spoke of the various features the committee has in mind for future programs.

Dr. C. E. Thomas, of Leesburg, exhibited an extremely interesting specimen of a seven months' old fetus with a large tumor projecting from the umbilical region. Upon dissection it was found to be the liver enlarged and extruded into that position. A special vote of thanks was given by the society to Dr. Thomas for his having brought the specimen before the society.

While the attendance has been fairly good at other meetings, there was a greater attendance at this meeting than any in the past six months.

Adjourned.

C. NORMAN HOWARD, Sec.

MARION COUNTY.**INDIANAPOLIS MEDICAL SOCIETY.**

(Meeting of May 4, 1909.)

At the regular meeting of the Indianapolis Medical Society, held May 4, Dr. Paul F. Martin, of Indianapolis, presented the following case reports:

Case Operated for Traumatic Epilepsy: Exhibition of Patient.

Geo. V., the subject of Jacksonian epilepsy, was seen by me for the first time on July 11, 1908, with the following history: Age, 36 years. Occupation, boilermaker. Father living and apparently in good health. Mother dead, cause of death unknown; there is one sister, who is enjoying good health. No history of tuberculosis or of neurotic diseases in family. Patient has been married eleven years; wife well and strong. She has never been pregnant. He has no recollection of having had any of the usual diseases of childhood, or ever suffered from illness of serious nature. Indigestion and obstinate constipation habitual. No history of syphilis nor of venereal disease.

Present complaint: When 15 years of age patient was kicked by a horse, receiving a lacerated scalp-

wound in the left parietal region. With the exception of a momentary dazed condition, no immediate serious developments arose. He was able to resume his ordinary work the next day. He continued in his usual state of health until he was 20 years of age, when convulsive attacks typical of epilepsy seized him. At first the number of the attacks averaged one in two weeks, the interval being free from complaint. At his twenty-eighth year they were of weekly occurrence, and more violent in character, fifteen to twenty minutes in duration, while at present they average three a week, lasting twenty to thirty minutes, and are invariably accompanied by a dislocation of the right shoulder joint. During the interval between attacks the patient suffers from a continuous dull headache, which is greatly aggravated from twelve to twenty-four hours previous to each seizure. With the oncoming of the convulsions sudden and severe hemicrania develops in the left parietal region when complete unconsciousness supervenes.

The patient seeks relief at the risk of paralysis following the operation, and even at the sacrifice of life.

presumably causing pressure and irritation of the motor cortex. One month's close observation substantiated the history given, and the peculiar characteristics of the seizures, in particular the manifestation of the motor discharge *regularly beginning* in the toes of the right foot and extending their march upward on the same side, previous to the general convulsions, and *regularly leaving* the patient with a dislocated right shoulder-joint.

There was no improvement under the usual therapy, general dietetic and hygiene measures, and careful attention to the bowels.

While there are no distinct clinical symptoms to be definitely relied upon, differentiating the essential, or idiopathic variety of epilepsy, from the traumatic or Jacksonian, if they may be considered as separate, the result of careful analysis of this case presents a clear picture of the latter form of the disease and gives an index to the operative measure for relief.

Operation: Aug. 6, 1908, at the Methodist Hospital. The usual omega-shaped flap made over the site of the original injury, including well the motor areas along

Period of Time.	Number of Attacks.	Duration.	Character.	Body. Weight.	Miscellaneous.
At time of operation.....	2-3 weekly	20-30 min.	Violent. Complete uncon. Shoulder disloc.	124 lb	Total incapacity for work.
One and two months after operation....	None		Light.		
Three months after operation.....	1	10-15 min.	Complete uncon. Shoulder disloc.		
Four and five months after operation... .	2	10-15 min.	Shoulder disloc.	154 lb	30 lb gain.
Six and seven months after operation... .	2	5-10 min.	Shoulder disloc.		
Eight months after operation.....	1	3-5 min.	Very light. No loss of con. No shoulder disloc.	158 lb	Total gain in weight 34 lb
Nine months after operation.....	0				

Gives graphic description of various stages of seizure.

Status Præsens: Poorly nourished individual, sensorium active, general lack of tone to musculature. Skin dry and harsh, slight cutaneous and sclerotic icteric tint, no edema or eruption. Mucous membranes pale, tongue coated; mouth and throat negative. Heart and chest negative; epigastrium and abdomen slightly tympanitic; no evidence of splanchnoptosis. Cutaneous and deep reflexes slightly exaggerated, knee-jerk equally increased. Babinsky negative; pupillary reaction active. No glandular enlargement. A distinct bony protuberance is to be felt at the site of the original injury in the parietal region approximating closely to the sagittal suture one-eighth of an inch posterior to the mid point of a line drawn from the glabella to the inion. This apparent hyperostosis overlies the cortical motor area of the leg. Observation at various periods gives the following average results: Temperature (per mouth), 98 F.; respiration, 20; pulse, 82; rhythmic, fair volume, apparent increase in tension and some slight arterial thickening. Blood pressure, 118 to 124 mm. Urinalysis, twenty-four hour amount, three pints, acid, amber; albumin negative; sugar negative.

Consultation with the attending neurologist at the City Hospital, Dr. Hutchins, resulted in a negative report; ophthalmological examination by Dr. Sharp showed a normal fundus. The skiagraph of the head gave no evidence of a hypertosis of the parietal bone,

the fissure of Rolando. The cranio-cerebral topography was ascertained according to the simple method of Chiene (an angle of 67½ degrees from a point one-half inch posterior to the middle of a line drawn from the glabella to the inion). It was my intention to bare the cortex by means of an osteoplastic flap; my purpose, however, was immediately defeated, upon removal of the first trephine button, finding intimate and dense adhesions connecting the dura with the button. Exploration with the dural separator and the probe revealed this very much thickened, parchment-like dura grown fast to the bone in every direction around the opening. The adhesions were so difficult to sever that it was impossible to enlarge the opening without serious damage to the underlying structures, except by carefully ronguering and slowly advancing with the De Vilbiss bone-cutting forceps. Thus a circular area of brain surface approximately 2½ inches in diameter was finally exposed, and an arachnoid cyst found corresponding in site to the cortical excito-motor area of the leg and foot muscles. The cyst was unfortunately ruptured and evacuated before its size could be estimated, its contents being of a muco-sanguineous character. The cyst-wall was excised, sacrificing as little as possible of the adjacent brain-substance; complete hemostasis was established and the rents in the dura repaired. Satisfying myself that the dural adhesions were entirely freed from the bone, within a wide radius,

surrounding the opening, the bone fragments were replaced and the wound closed, leaving a strip of gauze for temporary drainage.

Symptoms of severe shock followed the operation. The following day the patient complained of being unable to move his right arm and leg, complete motor paralysis having developed. By the end of the week the arm was considerably improved, and at the end of five weeks function was entirely restored. The recovery of function in the lower extremity was slow, but improvement manifest from month to month. Until the fourth month the use of crutches was necessary for walking, during the following two months a cane was used, and since then he walks without the assistance of either crutch or cane.

On the preceding page is a table of important data as a result of the operation.

General condition much improved, no intestinal or digestive disturbance, able to attend to his business regularly and earn a livelihood.

Though it is generally believed that the results even for the removal of a presumed causative lesion in purely Jacksonian epilepsy are poor, the result of the case presented to-night is at least encouraging, and gives prospects for continued improvement, and perhaps ultimate cure. I have tried not to present the case too soon, and I believe that the period of nine months after operation serves as a fair test for the actual benefits derived, and, furthermore, that these benefits can not be ascribed to psychical effect.

There is much difficulty in estimating results, as the wide difference in technique, and the personal equation present too great a factor. Of 258 cases collected only 20 per cent. were cured, 13 per cent. dying, these statistics being in accord with those of Harvey Cushing and Allen Starr. Until the pathogenesis of epilepsy is more thoroughly understood, we can hardly expect to formulate a rational therapy. Cortical gliosis, nuclear changes in the cells, and sclerosis of hippocampus major, persistent thymus, and status lymphaticus have each been held responsible for the inciting cause of the convulsive seizure, but whether these pathological changes represent the true etiological lesions, or their effects, or mere coincidences, is yet a matter in dispute.

However, surgery surely has a place in the treatment of traumatic epilepsy.

Carcinoma of Penis: Exhibition of Specimen and Pathologic Slides.

John F. H., aged 68; had ordinary children's diseases; no diphtheria; malaria forty years ago; rheumatism fifteen years ago; no typhoid. Patient contracted pulmonary tuberculosis during the Civil War in 1862-3. Aug. 17, 1863, he was discharged from the General Hospital at Louisville on account of consumption, for which he is now drawing a pension. He had never enjoyed robust health. In 1875 his body weight was 125 pounds; ten months ago he weighed 105 pounds. He gives a history of gonorrhea at the age of 17; no history of syphilis.

Present Complaint: About four months ago a small swelling about the size of a split pea appeared underneath the prepuce on the dorsal surface of the penis. Patient had always had a very tight phimosis, never having been able to retract the foreskin. Gradual growth in size of the swelling, never painful and causing no anxiety until a few days before my first examination, March 28, 1909.

Status Præsens: Cachetic appearing individual, presenting evidence of a chronic fibroid phthisis. The

penis was three times its normal size, club shaped, reddened, edematous, and boggy to the touch, as though the seat of an acute phlegmon. The prepuce was grown fast to the underlying swelling, completely covering the glans. The meatal orifice was entirely hidden in the tumefied, edematous mass. It was learned that within the past few days, since the swelling had increased, the patient was in the habit of scarifying it with his penknife, in order to relieve the tension before being able to pass his urine. The inguinal and femoral glands were markedly enlarged on the left side, though there was no apparent increase in size of the glands on the right side.

Free incisions through the skin and underlying necrotic mass, evacuated some pus, and disclosed the presumed carcinoma, which had not manifested itself on the cutaneous surface. Sections taken and pathological slides prepared showed the tumor to be a squamous epithelioma. Extirpation of the penis close to the ramus pubis, with complete removal of both chains of inguinal glands, was done three days later, though not without encountering some difficulty; no urethral guide could be used, the femoral mass of glands was closely hugging the femoral vessels, and adherent, and the patient's general condition was in such a state as to demand all possible saving of time. Uneventful recovery, with the exception of a slight sloughing of the skin at the femoral wound, due no doubt to insufficient nutrition to the skin-flap, necessitated by ligation of much of the arterial supply from branches of the femoral.

This case is interesting chiefly because of the gross pathological conditions found before operation; because of the disparity between the glandular involvements, and because of the slide section displaying such a variety of cellular growth, the slide showing the typical extinctions of solid epithelial columns, with an abundance of pearls; epithelial cell-masses, distinctly spindle shaped, apparently undifferentiated basal cells, and a dense round cell infiltration of the stroma.

PORTER COUNTY.

The regular meeting of the Porter County Medical Society was held at Valparaiso June 1, with the president, Dr. Powell in the chair.

The committee on deceased members was again continued.

The censors reported favorably on the applications of Drs. Neshit and Lewis, who were unanimously elected to membership. The application of Dr. Ryan was referred to the board of censors.

The discussion on forming a physician's club and having more frequent meetings was made a special order for the next meeting.

Pulmonary Tuberculosis was the paper of the day, by Dr. Take, of Valparaiso. He took up for discussion the etiology and prophylaxis, presenting the view that tuberculosis is a general constitutional disease due to environment, faulty metabolism and more especially imperfect aeration of the blood. The first tissues affected are the blood and lymph, and after this the tubercle bacillus, a vegetable organism, comes in to destroy the effete tissue, but is not a factor in producing the condition. The opinion was expressed that the tubercle bacillus can not destroy healthy tissue, also that the disease is hereditary. The corollary would follow that the tubercle bacillus is not necessary in the production of the disease and need not be present.

The radical statement that there is not necessarily a primary local lesion caused by the tubercle bacillus was not accepted by anyone present, but all agreed that some forms very closely resemble a general systemic infection and no local lesion is found as a focus.

Dr. Loring stated that Dr. Hektoen, of Chicago, has reported finding tubercles in the mediastinum in 10,000 consecutive postmortems.

Dr. Take then expressed the intention of changing his ground if this statement is authentic.

Adjourned.

G. R. DOUGLAS, Sec.

SPENCER COUNTY.

The Spencer County Medical Society held its regular session June 15, with President Gwaltney in the chair. Minutes of previous meeting read and approved.

Puerperal Fever was the title of a paper by Dr. G. B. DeTar, in which he said that the causes were shock, relaxation of uterus, exhaustion, incomplete evacuation and drainage. Treatment, fresh air, strychnia, whiskey, echinacea, quinin. Pulse should be watched in all cases.

Fracture of the Arm was the title of a paper by Dr. Harron, in which he said that fractures of the humerus may occur at any part of the shaft; fractures of the head and condyles being very hard to diagnose. They should be placed in a plaster dressing, and the friends warned as to a stiff joint. Discussion.

Adjourned.

H. Q. WHITE, Sec.

STEUBEN COUNTY.

The Steuben County Medical Society met June 20 in the Court House at 1:30 p. m., with seven members present. The minutes of the last meeting were read and approved.

Thos. J. Creel read a paper on "Management of Normal Labor." The paper was very instructive and one of the main points brought out was cleanliness, and a second point was manipulation with a view to giving Nature a chance to do its work without the danger of infection.

Geo. N. Lake read a paper on "Management of Abnormal Labor," which brought before the society the technique of versions, Cesarean section, repair of perineum and use and abuse of forceps.

R. L. Wade reported three cases of eclampsia.

The general discussion was opened by W. H. Waller, followed by all other members present.

M. T. RITTER, Sec.

BOOK REVIEWS

A TEXT-BOOK OF DISEASES OF WOMEN. By Chas. B. Penrose, M.D., Ph.D., formerly Professor of Gynecology in the University of Pennsylvania. Sixth revised edition. Octavo of 550 pages, with 225 original illustrations. Philadelphia and London: W. B. Saunders Company, 1908. Cloth, \$3.75 net; half morocco, \$5.25 net.

As indicated by the author's preface to the first edition, this work partakes more of the nature of a handbook for the student than a complete treatise on the subject, though certain changes and additions are made in the present edition which are demanded by recent gynecology. And yet many of the recent gynecological operations, the value of which has become firmly established, are not considered in the work, i. e., the Mayo

operation for the shortening of the round ligaments, where indicated, is now pretty generally conceded to be the best and most rational ligament operation of present-day gynecological surgery, and yet is not mentioned. Again, vaginal hysterectomy by the cautery, which certainly presents the most favorable statistics of any of the methods of treatment of cervical carcinoma, receives but the merest mention, and that only under the treatment of the subject of "Combined Abdominal and Vaginal Hysterectomy."

Statistics are but little used and the author has adhered pretty closely to his avowed determination of outlining but one line of treatment in a given condition, in order to avoid confusion.

GENITOUREINARY DISEASES. By Francis S. Watson, M.D., Senior Visiting Surgeon at the Boston City Hospital, Lecturer on Genitourinary Surgery in the Harvard Medical School; and John H. Cunningham, Jr., M.D., of Boston, member of the American Association of Genitourinary Surgery. Two volumes, 1,101 pages, 454 engravings and 47 full page colored plates, mostly from original drawings. Cloth, price \$12.00 for the complete work. Lea & Febiger, New York, 1908.

Neither the authors nor the publishers have spared any pains to make this quite the most elaborate and complete work on diseases and surgery of the genitourinary system that has appeared in recent years. Unfortunately, a few typographical errors, such as the elision of one letter of a word, have occurred in several places, but the mass of the printer's work is so well done, the engravings and plates so satisfactory, that the errors seem insignificant indeed. An error of computation, however, amounting to 10 per cent., is encountered in one summary of statistics. The manner of presenting a subject, viz., first the descriptive matter, followed by a list of illustrative cases, then a summary of statistics, and ending with a bibliographic list, is both advantageously methodical and pleasing to the reader.

The descriptions are, in the main, clear cut and concise, and yet as full as could be readily handled in the scope of the work. The pathology is both well described and beautifully illustrated. That the seven years put in by the authors in the preparation of the work have been well spent is again illustrated by the very comprehensive bibliography appended to each section, and those of the profession interested in this specialty should be grateful for the extensive statistical compilation, since for them an immense amount of time is thus saved in tracing up the literature.

Volume I deals with the diseases and surgery of the external genitals, the prostate and bladder, while Volume II is occupied by a like treatment of the kidneys and ureters.

For the general practitioner, nothing particularly new or startling is offered in the treatment of that common and most obstinate malady, gonorrhreal urethritis, the usual methods of treatment being described, the author, however, stating his preference for sandalwood oil internally for the acute and declining stages of the malady, combined with argyrol by hand injection and later protargol or nitrate of silver by endoscopy in the more chronic forms.

In the operative treatment of prostatic hypertrophy the author does not hesitate to express his preference for the perineal route and the finger enucleation.

Perhaps the most interesting chapters in the second volume are those on nephrolithiasis, renal and adrenal tumors and genitourinary tuberculosis.

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ORIGINAL ARTICLES

THE EARLY DIAGNOSIS AND TREATMENT OF SUPERFICIAL MALIGNANT GROWTHS.*

J. N. MCCOY, M.D.
VINCENNES, IND.

By the above title are included all forms of malignant disease of the skin and mucous membranes, embracing carcinoma lenticulare, carcinoma tuberosum, carcinoma melanotic or pigmented, Paget's disease, and the various forms of epithelioma, as follows: Superficial, papillary, nodular, and rodent ulcer.

The term epithelioma is often unscientifically used, being frequently made to cover all forms of malignant cutaneous disease, which is incorrect, as these ailments differ to some extent in histology and pathology, but not as to treatment and prognosis, so, for the sake of brevity and to avoid tiresome and needless repetition, the term epithelioma will be used here to cover all the above-named diseases so far as treatment and prognosis is concerned.

HISTO-PATHOLOGY

There are two distinct elements involved in the formation of this growth, epithelial cells and connective tissue stroma.

The cells are medium or large, never small, and contain a large, clear nucleus. In tumors of the skin the cells are usually of the squamous variety, while the disease of a mucous membrane shows cells of the cylindrical or columnar type. In the glandular affections we find a new epithelium of a cuboidal or polyhedral type.

In epitheliomata of the skin there is a tendency to an arrangement in concentric whorls,

between which will be found bands of connective tissue, which accounts for the irregularity of surface always noticed in these tumors, at least when sufficiently advanced, the whorls being elevated above the connective tissue bands. At a later date the apex of these whorls may harden and take on a horny glistening appearance. After the tumor reaches an advanced state there occurs a fatty degeneration of the cells, together with a cloudy swelling or dropsical infiltration.

Inflammatory changes are frequent, owing to the exposed situation and consequent liability to infection. The staphylococcus and streptococcus frequently invade the growth, causing the sloughing often found in these tumors and hastening the progress of the disease.

Erysipelas is not rare, and tuberculosis has been known in this connection.

The new growth goes on by a proliferation of cells from the epithelium of the hair follicles, or glandular structures, or from the mucous membrane.

MALIGNANCY.

That all of the entire group of maladies are malignant is beyond question. The malignancy varies with the situation of the tumor. They are especially malignant on the lips, axilla and genitals.

CAUSATION.

The cause of superficial malignant growths is still a mooted and undetermined question, though there are certain contributing factors which are well known and worthy of full attention.

1. Epithelioma occurs more often in males.
2. It is essentially a disease incident to advancing years, being rare under 40 and more often seen after 50 or 60.
3. Local irritation is widely recognized as an exciting agent. The most simple and common lesion may furnish the ground work of an epith-

* Read before The Second District Medical Society at Bloomington, Indiana, May 12, 1909.

elioma. Common warts and moles are to be looked upon with suspicion, as they grow in precisely the same manner as epithelioma—i. e., by the proliferation of cells—and frequently do, after years of the characteristics and history of benign growths, break down and assume all the characteristics of malignancy.

4. Heredity is a factor, but it is not held to be an essential.

A few prominent men hold to the infection theory, but this is only a theory, being as yet unsubstantiated.

DIAGNOSIS.

The main things for consideration in the diagnosis of epithelioma are:

1. The age of the patient.
2. The fact of it being (usually) a single lesion.
3. Origin, in a wart, mole, "cold sore," herpes, fissure, eczema, nodule or scurfy spot.
4. The character of the border, a pearly, roll-like elevation or a hard elevated infiltration.

Syphilitic ulceration, chancre of the lip, warts and lupus vulgaris must be differentiated. Syphilitic ulceration, like epithelioma, is frequently situated on the face, but differs in that it is usually multiple, while epithelioma is almost always single and, as a rule, is not rounded in form, but segmented and irregularly circinate.

Benign warty growths can only be differentiated by long observation and consideration of their history and course. It is sometimes impossible to successfully differentiate; hence, as mentioned otherwise herein, these supposedly benign growths should, to say the least, always be looked upon with suspicion, and, whenever possible, should be removed, by excision and cautery, or by electrolysis.

Stellwagon states that a persistent localized thickening or abrasion on the lip, and especially the lower lip, in a person past 40 years of age means always an epithelioma.

In this region, however, as well as the genital region, we have the possibility of chancre to consider, but the more rapid growth of the chancre and its usual slight tendency to ulceration makes differentiation easy. Differentiation between epithelioma and lupus vulgaris is not always easy. Age and family history are here to be considered. Lupus vulgaris occurs usually before middle age, but may occur in later life. Lupus, in all forms, is of tubercular origin; hence the importance of ascertaining family history. If lupus be new, the bacillus tuberculosis may be easily found, which will practically establish the diagnosis.

The court of last resort, however, is the pathological laboratory. Examination of carcinomatous tissue under the microscope by one skilled in its use yields information which is definite and conclusive. Whatever means of diagnosis we may have, or however certain we may be, it is easy to secure a fragment of the growth in question and submit it to a pathologist, which offers us a positive diagnosis and gives us information as to the origin of the growth, whether of the superficial or deeper structures. We are not warranted in giving a diagnosis or taking up treatment of these growths, without first resorting to this procedure.

TREATMENT.

The treatment of epithelioma is either surgical or therapeutical, or both. The surgical treatment consists of a radical and complete excision of the tumor, including the immediate surrounding tissues, early in the career of the disease. This is objectionable, in that it involves more or less, and in some instances great, destruction or removal of tissue, entailing life long disfigurement. It must be done very early in the life of the growth in order to anticipate metastasis and a consequent recurrence of the disease. These growths too frequently are never under the notice of the physician until, by reason of their advanced state, sloughing and consequent metastasis, the time has passed when excision alone can offer hope.

The therapeutic treatment, as recognized by the medical profession today, consists of the administration of tonics and reconstructives, the one most used being arsenic, and the scientific exposure of the tumor to Röntgen rays.

The use of tonics is undoubtedly to be advised when the disease has advanced to the extent of becoming constitutional and producing the characteristic cachexia or marasmus, otherwise any medication is superfluous.

A treatment once in use by the profession in general and which is still in use by quack cancer specialists is the application of escharotic pastes and other mixtures with the object of destroying the tumor. This causes great suffering to the patient and the usual result is to hasten the growth of the tumor and promote metastasis, for it is a notorious fact that any form of irritation short of complete destruction will have that result. Cures by this method are limited to those cases in a very early stage, and then are so rare as to be almost unheard of, and should a cure result it can only do so by great destruction of tissue, with consequent physical pain, mental anguish, and life-long disfigurement. The attempt to remove these growths by the eschar-

otic method is utterly reprehensible, as at the best it can offer nothing better than the knife and is sure to result in any or all of the evils mentioned above.

The exhibition of *x*-rays is the treatment for epithelioma today. Statistics on the subject are so favorable that, meager and imperfect as they are, they lead us to believe that the percentage of cures, without recurrence, will compare favorably with the treatment of any human ailment by any means.

This treatment consists of exposing the tumor and surrounding parts to the fluorescent rays generated in some form of Crookes' tube, by a static machine or *x*-ray coil, attached to a commercial lighting circuit. The coil is preferable to the static machine, being uncomplicated, always ready to work, and supplying sufficient current for any purpose, merely by the throw of a switch. By means of the rheostat the amount of current is under perfect control, which is a very essential feature in therapeutics.

The position of the patient for treatment depends upon the location of the growth. Whenever possible, and it is usually so, the patient should be put upon a table, as he can then lie at rest and be absolutely quiet during the exposure. It is necessary at intervals to expose to the rays the surrounding tissue, but usually all surrounding parts are protected from the rays and only the tumor itself exposed. Various means have been devised for this purpose, chief of which are a heavy lead plate in which a suitable opening is contrived by means of slides; a plate of aluminum with ground wire attached; but probably the most useful one to the operator, and one which offers sufficient protection to the patient, is heavy lead foil. This can be cut, molded or fashioned in any way necessary to meet irregularities of the surface of the parts or the border line of the tumor.

Lead foil is not wholly impenetrable to the rays, neither is aluminum; the only substances which offer perfect resistance to the rays are heavy plates of either lead or gold. These are objectionable by reason of weight and expense, in addition to which it would be impossible to fit a heavy lead plate in a manner to perfectly expose the tumor with all its irregularities of outline and yet protect surrounding parts. Lead foil and aluminum plates are believed to deprive the rays of the elements which produce dermatitis.

Suffice to say that in my own experience I have always been able to protect the patient, and I have seen no reports of dermatitis produced through either of these substances.

It is necessary to carry the treatment to the point of slight reaction, but great discrimination is necessary. The idiosyncrasies of the patient must be investigated and determined by tentative treatments at long intervals.

At least one week must elapse between the first and second treatments, and the interval between treatments must be cautiously decreased with a constant watch for untoward symptoms. Some patients exhibit a remarkable tolerance for the rays, while others seem possessed of an idiosyncrasy against them. The interval between treatments may be decreased until to some patients an exposure may be given every day. The time occupied in an exposure varies in the same manner as the interval between treatments.

A procedure now being followed by some operators, and which has much to recommend it, is a combined treatment, embracing surgery and *x*-ray therapy.

If a tumor be well advanced, and elevated above the surrounding tissues, a partial excision is advisable, cutting the tumor down to the level of the surrounding tissues, after which the regular Roentgen treatment should be pursued. This has a distinct advantage in that it reduces the depth of the tumor, thereby offering less resistance to the penetration of the rays, which is a valuable consideration, as this carcinomatous tissue is quite dense and offers a high degree of resistance to the rays, preventing their perfect penetration to the deepest parts of the tumor. This combined method is now being practiced in all forms of operable malignant growths, the *x*-rays being used following operation as a means of preventing recurrence. Good reports are given of the procedure in case of malignant disease of the breast.

PROGNOSIS.

Variety, extent, situation, duration, and rapidity of growth must be considered before stating a prognosis. While a prognosis is generally favorable if the case comes under treatment before extensive metastasis has occurred, yet the individual peculiarities of the patient must be considered before giving any trustworthy statement as to the ultimate result.

Recurrences may occur, and probably will occur, in cases which are far advanced before coming under treatment. These recurrences do not necessarily spell failure, as, if they are promptly brought under treatment, they can be defeated, but the patient must be warned of the possibility of recurrence, and full information given him on the subject, to the end that if the disease does recur he will know what to do.

If they be not warned of the possibility of recurrence the moment the disease reappears they lose faith in the medical attendant, and in the medical profession in general, and despair seizes them, and if they again seek medical attention it will probably be of that eminent class of practitioners who guarantee a cure, pay in advance.

Fools can ask questions which wise men can not answer. The laity never fail to ask what is going to happen, to demand a prognosis, wherein they are very flattering to our perspicacity, for if they go to our legal brethren they pay their fee, carry all the responsibility and ask few questions. If they go to the doctor of divinity and do not get salvation they take all the blame themselves, but from us they want to know, and they have a right to know, the most accurate information we can give them. Who can blame them? Their lives and future are at stake.

Briefly, the prognosis in cases brought under treatment, early or comparatively early, is recovery without recurrence. In cases far advanced before treatment and in cases previously treated by the escharotic method the prognosis is recovery with the possibility or probability of recurrence. In those cases advanced to the degree of causing the characteristic cachexia the prognosis should be plainly stated unfavorable and the *x*-rays offered only with the hope of prolonging life and giving freedom from pain.

Pusey and Caldwell report 69 consecutive cases treated by *x*-rays, of which 58 were cured. Three other cases had recurrences which readily yielded to treatment and were ultimately cured, making a total of 61 cases cured of a total of 69 treated. They say: "In these 61 cases *x*-rays have proved efficient and have combined efficiency with freedom from pain and an excellent character of scars."

Kassabian says: "The results obtained from treating epitheliomata with *x*-rays have more than satisfied its most sanguine advocates. That malignant cutaneous growths can be made to disappear entirely is the common experience of Röntgen therapeutists."

Rockwell says: "The beneficent action of *x*-radiation on integumental diseases of cancerous character can not be doubted. While it may not always yield as readily as lupus, many undoubted cases of genuine cures have been reported. If a shield is used for the protection of healthy tissues in this, as in other forms of carcinoma, it should be seen to that sufficient area is exposed to take in every possible extension of epithelial cell growth. Some cases of failure are undoubtedly due to the fact that the

shield has been so placed as to cover apparently healthy tissue, but in reality tissue containing epithelial cells. If an epithelioma involves much thickness of tissue the suggestion that the knife be used commends itself. We thus avoid a tedious interval in which the diseased tissue is necrosed, broken up and disappears. After the knife *x*-rays can be used, effectually destroying such growth as remains.

THE USE OF THE GIANT MAGNET IN REMOVING FOREIGN BODIES FROM THE EYE.*

C. W. CONGER, M.D.
INDIANAPOLIS, IND.

The diagnosis and successful removal of foreign bodies from the interior of the eye is an important problem that presents itself to physicians.

This problem is so nicely met by the use of the giant magnet that, although it is not a new method, it may not be a waste of time to consider it.

It is known that foreign bodies have become encysted in the eye, and so remained for some time without causing much trouble, but this is so rare that it is folly to expect such a favorable outcome in every case. Any foreign body which is allowed to remain in the interior of the eye is almost sure to cause its destruction, and also, by sympathetic inflammation, the destruction of the other eye.

The sooner the offending particle is found and removed the better is the prognosis for both the injured eye and its fellow.

Even if no sight remains in the injured eye it is well worth while to save the globe for cosmetic reasons alone.

As such bodies are almost invariably composed of iron or steel nothing can equal in efficiency the use of the giant magnet for either their detection or extraction.

Without such a powerful magnet it is necessary, when removing foreign bodies back of the lens, to make a scleral opening and introduce instruments or a small magnet into the vitreous and search for the object. This in itself is destructive to the delicate structures of the eye.

With the giant magnet this is not necessary. All that is required is to adjust the tip of the magnet at the proper place against the cocaineized eyeball and apply just enough power to cause the piece of iron or steel to work out along

* Read before the Marion County Medical Society, Dec. 1, 1908.

the lines of least resistance until it presents itself in the anterior chamber of the eye.

The first thought would be that a magnet of such pulling power would bring out a piece of metal with so much force that great damage would be done to the eyeball in the operation. This is avoided in two ways:

First. On the application of the magnet the iron or steel composing the foreign body polarizes and so immediately turns endwise toward the magnet in the same manner as does the compass needle to the North pole, and so comes out the easiest way possible, not broadside on (in which case it would do damage), but point first, and so doing the least possible harm.

Second. A rheostat of sufficient resistance to easily control the amount of current is used. By this means just enough power to coax the iron or steel very gently toward the magnet can be thrown on.

If a small amount of current is not enough the full power can be used, throwing the current on and off so as to dislodge the foreign body by repeated sudden pulls.

In the operation of the magnet the fear of too much power gives no anxiety. The only fear is that of the possibility of failure because of lack of power.

The details of the operation depend on the condition of the eye and the position of the wound of entrance. If the lens is already badly injured the accepted practice is to place the tip of the magnet against the center of the cornea and turn on the current gradually until a bulging at some point of the iris shows the presence of the metal.

Then the current is shut off and the position of the magnet changed and the power reapplied so as to slide the foreign body around the lens and out through the pupil into the anterior chamber.

If the wound of entrance is not large enough or not available for extraction the current is again thrown off and a convenient opening made in the cornea of sufficient size to allow the foreign body to pass out and the magnet is then momentarily reapplied and the foreign body removed.

If the body should be rough and jagged and so become entangled in the iris it may be wise to make a preliminary iridectomy. If the wound of entrance is in the sclera there is no objection to enlarging that wound if necessary and withdrawing the object along the same path by which it entered.

The use of the giant magnet for diagnostic purposes is good practice provided that all is

ready to complete the removal of the foreign body if it be there.

Just a momentary approach or contact of the magnet with a small amount of current will cause enough movement of the foreign body if it be there to give the patient sensation or pain.

Diagnosis by means of the *x-ray* is a waste of time and adds to the risk of infection by delay.

It is a very difficult matter to decide, by inspection alone, whether a foreign body has really entered the eye or has simply struck it with sufficient force to make a wound and then bounced off. In these cases the humors of the eye are so clouded with blood that the use of the ophthalmoscope is rarely satisfactory and the size and location of the wound through which the body may or may not have entered does not help much in diagnosis.

A brief summary of two recent cases will illustrate this point.

The following case report was written by Dr. Read of Tipton:

Mr. J., age 45, a machinist in the employ of the Lake Erie & Western Railway Company, appeared in my office on the morning of April 14, 1908, at about the hour of 9, saying that about 30 minutes before, while cutting off a steel bolt with a chisel and hammer, a fragment from the bolt had struck him in the eye, and that he believed it was at that time within the eyeball. On examination I found a V-shaped wound in the cornea of the left eye, near the sclero-corneal margin on the nasal side. The anterior chamber was filled with blood, but immediately beneath the corneal flap was what appeared to be a black foreign body about an eighth of an inch in length by a sixteenth of an inch in width, which I believed to be the piece of steel in question. On the introduction of a slender forceps through the corneal wound there was an escape of the blood-stained aqueous, together with a small quantity of vitreous, or lens substance, which revealed the fact that the supposed foreign body was a gaping rent in the iris. I could neither see nor feel any hard foreign substance.

Believing that the offending piece of steel was probably within the vitreous chamber, and not being equipped with a proper magnet, I sought the counsel and services of Dr. F. C. Heath, who applied a small but powerful magnet with negative results.

Not being quite satisfied, we together took the patient to the office of Dr. C. W. Conger, who applied a large giant magnet with absolutely negative results. We got no steel, no bulging of the eye tissues, and no pain. We concluded that the steel had not entered the interior of the eyeball. The patient was taken home and put on a treatment which consisted mainly of atropin, hot water and rest.

There was quite a little inflammatory reaction and for a few days the patient suffered some pain, and on one occasion it was necessary to administer an opiate for its control.

Within three days the lens had become opaque and the perception of light was lost, and is still absent, although the lens has been sufficiently absorbed that the red reflex of the fundus may be recognized with the ophthalmoscope. The iris is adherent to the lens capsule by three small points, and a triangular, stained scar is plainly visible in the anterior lens capsule. All signs of inflammation have disappeared, the patient is perfectly comfortable, and expects to return to his work on next Monday, the 25th of May.

CASE 2.—Referred to Dr. Heath of Indianapolis by Dr. Emory of Bedford, Ind. Seen with Dr. Heath. While Mr. S., age 23, on Friday, April 17, 1908, was working in a stone quarry a glancing blow from a sledge on a drill drove some pieces of steel in his face. One piece perforated the upper lip and was spat out. Another piece made a small wound in the lower margin of the cornea of the left eye. Bedford physicians disagreed as to whether the steel was in the eye or not. He arrived in Indianapolis on Saturday night, but was uncontrollable and in bad physical condition from the effects of atropin and cocain. A momentary application of the magnet proved the presence of the steel, but it was thought wise to delay its removal until the next morning, when, under chloroform, a piece of steel the size of a grain of wheat was easily drawn into the anterior chamber by the magnet and removed through an enlargement of the wound of entrance.

An iridectomy was also made because of the lacerated condition of the iris caused by the entrance and exit of the jagged steel and the incineration from action of the pus, of which the anterior chamber was about one-third full on the morning of operation. Free drainage was also thus obtained. Although the steel was in the eye so long a time (about 50 hours) and infection was so thorough (there being some visible dirt on the steel at the time of its removal), the globe is intact and at the last report light perception was present with great hope of improvement.

Another use of the giant magnet suggested by recent experiences, which is of interest to the general practitioner, is that of assisting in locating and removing needles or bits of iron or steel from the hand or other parts of the body.

Anyone who has tried to remove a needle from the hand even with the help of the *x*-ray knows what a task it is. The part in which the needle is known to be can be made to resemble mince-meat and still the needle will be missed.

While the giant magnet will not remove the object bodily, it will locate it accurately, either

by the sense of feeling of the patient or by the bulging of the tissues over it, and so furnish a guide for incision and removal.

PATHOLOGY OF THE SEMINAL VESICLES AND PROSTATE WITH SUGGESTIONS OF THE NECESSITY FOR SURGICAL TREATMENT.*

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That the retained pathology, after resolution has reached its limit, following acute infection from Neisser's coccus, is likely to ever remain a menace during the future life of the individual, is a fact, is freely admitted by all men thoroughly conversant with this subject.

It will be the effort of this article to merely show the rôle played by the pathologic seminal vesicles and prostate as a center of distribution for infection and suggest the surgical necessity in their treatment.

In spite of every precaution taken to prevent infection there are a certain few epididymites that occur after the first sound introduction. This has been personified since the advent of the Kollmann dilator. It is the writer's opinion:

First. That a sound resting upon a sealed utriculus masculinus (sinus pocularis) bearing on the verumontanum might force the infection on through the ejaculatory duct into the vas deferens. That the infective material prior to instrumental manipulation is extra-urethral is a logical conclusion. The anatomic position of the prostatic duct openings favors flooding of the sinus pocularis.

Second. A Kollmann dilator might, with the rubber shield acting as a roof to the utriculus, empty an infected vesicle into the vas by way of the ejaculatory duct. The anatomic position of the distended vesicles behind and surrounded by the trigonum vesicæ places them in position for sound interference.

Third. A Kollmann dilator acting upon a distended vesicle, with a strictured ejaculatory duct present, would short circuit to the vas deferens as the only means of exit.

The surgeon is not surprised to have post-operative epididymitis follow operations around about the bladder neck, which is likely due to expressed infection during surgical manipulation. The same is present to a degree following massage in that region. The rôle played by the prostate in epididymal infection is not as great

* Read at the French Lick Meeting of the Indiana State Medical Society.

as the vesicles on account of the prostatic emptyings being external to the utricle. The infection would then needs be carried by continuity.

The vesicles emptying into the ejaculatory ducts at the vasa junction invite contamination. The resulting pathology of the vesicle after infection is similar to other mucous-lined tubes with the addition that the seminal vesicles contain glandular tissue.

Had embryologists, along with the ejaculatory ducts and broad ligaments, given the utricle the vesiculae seminales instead of apportioning them to the Wolffian duct system we could, from female homology, call them male *pus tubes* when purulent.

With no license for analogy, probably the best comparison with the female is the Bartholin gland and duct pathology.

1. Like the epididymis and vesicle, the left one is the most frequently infected with Neisser's coccus.

2. The evacuated fluid resulting from duct obstruction (retention cyst) concomitant to passive inflammation of the vulvo-vaginal gland or duct or a vesiculo-seminal gland or duct (ejaculatory) is alike in color and composition.¹

3. They are both in loosely connected tissue, around about, which affords room for distention.

4. There is a like inclination to refill after evacuation.²

5. To-day complete extirpation is, in both, the surgical necessity for a cure.

So far as usefulness and functional necessity, had the maker of man anticipated infection he could have delegated the work of the seminal vesicles to Cowper's glands, which are more accessible for removal. Thus he could have simplified a surgical procedure which encounters grave difficulties.

A summing up of the principal points in the pathology of twelve bladder cases under observation at the present time (excluding tuberculosis and kidney infections) will tend to illustrate the pathology as the writer finds it in this class of cases and will show the tendency to non-complete resolution in spite of every attention given.

Unless a perineal section was made some of the following treatments were given at each sitting:

Urethra and bladder neck dilatation with Kollmann dilator (mostly gradual with repeated sittings up to 32 F.); instillation 10 per cent. sil-

1. Comparative anatomy. Squirrel genitalia show Cowper's glands forty times larger than the seminal vesicle. Clvet Cat. Absence of seminal vesicles and large Cowper's glands. Goat. No seminal vesicles.

2. One case of seminal vesicle cyst quoted by Jacobson; ten pints of brown serous fluid were drawn off.

ver nitrate; vesiculo-prostatic massage; cystoscopy with bladder painting (silver nitrate) to ulcers, etc.

All bladder soundings preceded by introduction of four ounces of saturated boracic acid solution without catheter introduction.³ First bladder soundings followed by ichthyol application to scrotum and testicular suspension compression.

The ages range from 19 to 65 years—six married, two widowers and four single. Eleven had gonorrhreal infection—No. 3, twenty-seven years ago; No. 1, twelve years ago; Nos. 8 and 11, ten years ago. Number 4 had two infections, twenty-six years ago and one year ago. No. 5 had three infections, one twenty-six years ago, with no sequelæ; another two years thereafter, with left epididymitis, and twenty-two years ago the third infection occurred, followed by both left and right epididymitis.

Discharge was present in all but No. 9. In majority intermittent. No. 5 had a lapse of twenty years; some had continuous discharge. The acute stage was complicated with cystitis in eight, epididymitis in three, prostatitis in ten, vesiculitis in ten, Cowperitis in one.

Strictures followed the acute stage in eleven, sexual hyperesthesia nine, sexual anesthesia in one. Postinstrumental epididymitis occurred in four of the cases. No. 12 had bilateral epididymitis following bilateral vesiculitis after two years interval of seemingly perfect health.

Bacteriological findings showed the gonococcus in the vesiculo-prostatic secretion in seven. No. 9's infection (without gonorrhreal history) showed the colon bacillus and a streptococcus.

Cystoscopy findings showed the characteristic bladder neck inflammation without tuberculosis, also lack of infection coming from the ureteral openings.

Rectal examination found the left vesicle and left lateral prostate the most frequently involved. The remainder were bilateral.

Perineal section was made on Nos. 1, 2, 3 and 4 draining vesiculo-prostatic abscesses. With the exception of No. 3, who seems to be entirely recovered, they still have a focus of pathology in the vesiculo-prostatic region.

With marked improvement in each case, the writer finds retained pathology, with the exception of No. 3, in all, which shows no tendency to resolve.

He knows no class of cases with the same percentage of prevalence that tests the surgeon's

3. The writer uses a six ounce rubber bulb with soft rubber tip. A Valentine irrigator can be used with soft rubber tip or else a Politzer bag.

skill and with less success resulting than infected vesicles and prostate.

From the hypotheses that the infected vesicles are etiological factors in (a) epididymitis, (b) gonorrhreal arthritis, (c) prostatitis, (d) cystitis, and even (e) appendicitis.⁴

That section of vas deferens with drainage *protemporarie* relieves postbladder symptoms; that there is a comparison with the female "pus tubes" and Bartholin gland infection—the question is opened, on contemplating their complete removal, whether the end results justify the means necessary for their removal. That their total eradication is desired goes without saying.

Surgery is governed by necessity. If no other means permanently controls vesicular pathology, surgical removal is the necessity for the vesicle as well as the prostate, when infected.

902 Calhoun St.

LAW AND MEDICINE.*

HON. C. A. DE BRULER.
EVANSVILLE, IND.

As you gentlemen all know, the two professions of law and medicine sometimes come into vital contact in cases in which medical expert testimony becomes necessary. This character of evidence is frequently of the highest importance. Sometimes it forms the turning point in the controversy, and this is true in both civil and criminal cases. Its vast importance, for example, in criminal prosecutions where the defense of insanity is interposed has been impressed upon you in the reports of very recent cases which have attracted wide attention. But it is also of great importance in many civil cases which do not attract public attention. In other words, the position of the medical expert witness is always one of grave and serious responsibility and worthy of the best thought we can give to that subject.

The measure of the expert's responsibility may be easily determined by a consideration of the object of every judicial inquiry. What is a court? For what purpose does the court exist? The answer is very simple; the court is a machine, the best we have yet been able to devise, to do justice—nothing more nor less. The judge on the bench, the jury in the box and the attorneys at their tables are all parts of this machinery, are all under oath and are all in their

places to co-operate in seeing that justice is accomplished. Primarily the truth as to the facts of the case must be ascertained; that is what the juror is sworn to do, to find the truth; that is what the word verdict means. It is nothing to the purpose to say that as we are all fallible beings all parts of this machinery may not respond as they should to this ideal. In so far as any part of it fails, either through ignorance or bad intentions, to perform the high duty devolving upon it, just in that proportion it is false to its responsibility. If jurors allow themselves to be swayed by passion or prejudice and refuse to be controlled by the evidence, they are, of course, unmindful of their oath. If attorneys regard the trial as a mere duel of wits they lose sight of their high and grave responsibility.

Why should not the expert regard himself as a part of this machinery? He ought to regard himself as, in some sort, a minister of justice. He is there simply to speak the truth as best he can without fear or favor. Of course, I realize that there are difficulties inherent in the nature of this subject and which can not be avoided. Where the testimony is purely of an expert character I know that in many cases there is a broad field for the expression of contrary opinions. In many cases it may very well be that honorable men of the medical profession may honestly express contradictory opinions upon a given hypothesis. Perhaps this is especially true in cases of insanity to which allusion has been made. It is largely an unexplored field and very little real progress has been made in understanding that subtle condition which is known as insanity. I do not see how this difficulty is to be avoided, but I can see very clearly the only true principle which should govern the conduct of the expert, and that is to the best of his ability to express an honest opinion without regard to its effect upon the one side or the other.

The present system by which experts are employed I believe to be wrong and that it leads to bad consequences. They are now employed by the different parties to the controversy and it is almost inevitable that even an honorable man should occupy the position of a partisan; he consults only with the one side of the case, and naturally tends to form his opinions in accordance with the theories of that side. This has been illustrated, as you all know, in a very marked way in cases where there is abundant wealth to employ the expert at a very high salary. Such a man necessarily becomes a partisan and is looked upon as such by the jury and the public. Of course, we all know this is wrong. Par-

4. "Unusual Positions of the Appendix." Tuholiske, Jour. A. M. A., April 25, 1908, page 1378.

*An address given May 25, 1909, before Vanderburgh County Medical Society.

tisanship should never enter the witness box. I believe that a much better result would be obtained if the court itself would choose the experts, and, if the court thought the matter was of sufficient importance, I am inclined to believe that he should require the expert to testify, whether the parties desired his testimony or not.

Some criticism has been made this evening on the conduct of lawyers in cross-examining the medical expert. The case of District Attorney Jerome in cross-examining an unfortunate doctor in the Thaw case has been cited as an example, and the main criticism has been that Jerome's questions on cross-examination had no relation whatever to the ultimate object of the inquiry—that is, the insanity of Thaw. This criticism, however, loses sight of the fact that one of the main objects of cross-examination is the testing of the witness. This test is applied not only to his honesty but to his ability. It may very well be that many of the questions asked on cross-examination may not bear upon the question of sanity or insanity at all, but they may possibly tend to show very strongly that the expert is a jackass who has no business to be in the witness chair at all. Of course, the attorney, if he does his duty in the light of principles I have tried to enunciate tonight, will prepare himself to have a just understanding of the question at issue, will always be a gentleman and will treat the expert fairly. I think this is done in most instances, and I know it is done by all lawyers who have the proper regard for their responsibilities as such. Here and there in all professions may be found unworthy members; this has always been so and I suppose always will be so. But the fact that there are unworthy lawyers, quacks of medicine, and hypocrites in religion does not at all affect the truth that the professions of law and medicine and that of the minister of the gospel are high and noble callings adorned with thousands of capable and honorable men.

The truth is that the cross-examination of the expert with a view of testing the validity of his opinion has become of increased importance because of the very fact that medicine is necessarily a tentative science and has made wonderful progress in many directions in comparatively recent years. We all know that thousands of earnest, self-sacrificing men are devoting themselves constantly to the scientific investigation of the sources of disease and the methods of prevention and cure. Wonderful advance has been made in these directions within a very recent period. It results from this, of course, that an opinion confidently held today by med-

ical men may be entirely discarded tomorrow, and it is just because of the progressive nature of the science that as time goes on the ability of the expert to express the right kind of an opinion becomes more and more important and the cross-examination directed toward determining his ability constantly becomes correspondingly important.

Gentlemen of both professions, let us tonight resolve that, so far as in us lies, we will co-operate in the effort to see that exact justice is done in all forms of litigation, and that we are all parts of a machinery devised for the single purpose of doing exact and equal justice to all men without fear or favor.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

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(Continued from page 249, Vol. II.)

FORMATION AND GROWTH OF OUR PRESENT STATE MEDICAL ASSOCIATION.

Inasmuch as but one or two copies of the early Transactions of our State Medical Society are known to be in existence, and these exposed to the dangers of fire or decay of time, I think it proper to reprint some historical data that ought not to be lost or forgotten.¹

I have access to the copies in the Indianapolis City Library. These were generously presented to the library by Dr. L. D. Waterman on Dec. 1, 1898.

I find no evidence that a formal or informal call was made for the meeting to assemble at Indianapolis, but presume such a request had been made.² I quote as follows:

"The State Medical convention assembled in Wesley Chapel, at Indianapolis, on Wednesday, June 6, 1849, at 10 o'clock a. m. A temporary organization was effected by calling Dr. John Sanders to the chair and appointing Dr. John S. Bobbs Secretary."

Some discussions have occurred as to who was the first President of the State Society, but that subject is easily determined by a reference to

1. Since 1904, "Society" is changed to "Association."

2. Since writing the above, I find that notice had been given for such a meeting: "Indianapolis had a local Medical Society, and in May, 1849, a call was sent out by it for a State Convention the following month. Private letters were sent by the members to their medical friends over the State inviting them to attend the meeting to be held June 6, 1849." Dr. W. H. Wishard, President's address.—Trans. 1889, p. 17.

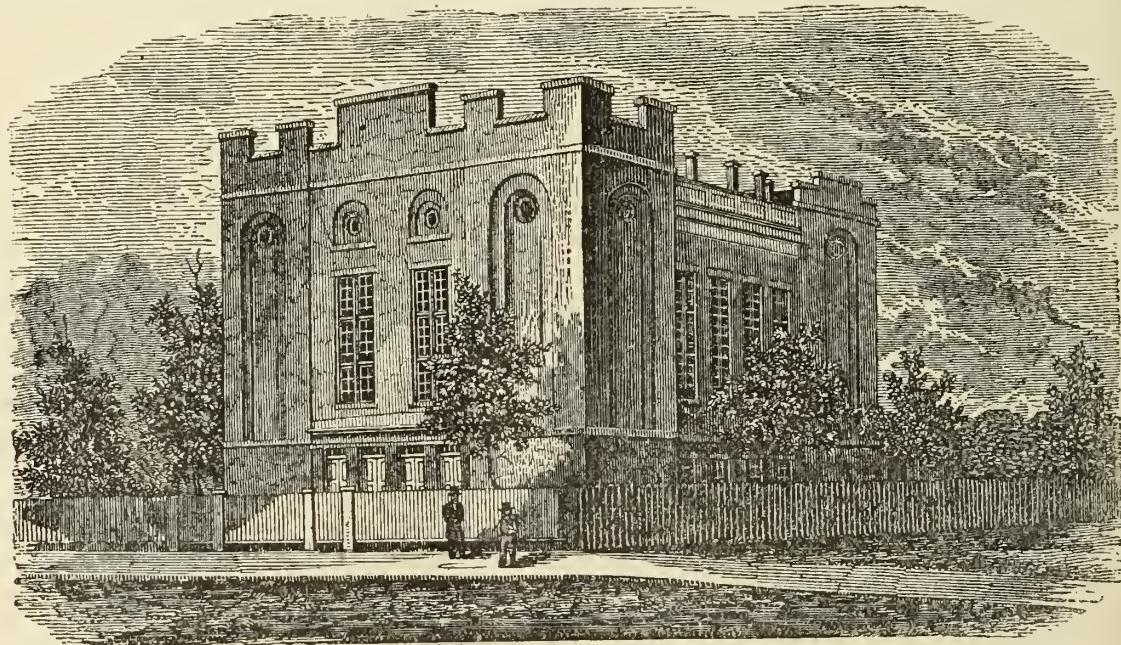
the Transactions.³ The first copy shows the title page as follows: "Proceedings of the State Medical Convention of Indiana, held at Indianapolis, June, 1849. Indianapolis: Printed by John D. Defrees, 1849." It is a pamphlet of fourteen pages.

It will be observed that the meeting was styled "Convention," and not "Society." In fact, it was not regarded by those present as a regular meeting of the society, but rather an assembly for the *organization* of a state society. It was the Declaration of Independence for medical societies in Indiana!

The title page of the second copy of Transactions reads quite differently: "Proceedings of the First Annual Meeting of the Indiana State Medical Society, held in the city of Indianapolis,

delivered no address. At this meeting a committee of one from each district represented was appointed to nominate officers for the "society." Drs. Bullard, Kersey, Ryan, Florer and Mullen were appointed, who reported the following named gentlemen for the respective offices, to which the society elected them: President, Dr. W. T. S. Cornett; Vice-Presidents, Drs. Asahel Clapp, Nathan Johnson, Livingston Dunlap and Farquher; Secretary, Dr. John S. Bobbs; Treasurer, Dr. John L. Mothershead.

The society convened at Indianapolis on May 15, 1850. Dr. Cornett presided and gave an address on the subject, "Rise, Progress, Present State and Future Prospects of Medical Science." It was delivered in the evening at "candle light."



WESLEY CHAPEL

Southwest Corner of Meridian Street and the Circle, Indianapolis, Indiana.
Birthplace of Indiana State Medical Society, June 6, 1849.

May, 1850. Indianapolis: Printed by Elder & Harkness, 1850." This is a pamphlet containing thirty-two pages. It is styled a "Society" now, and is recorded as the "First." This is the beginning for numbering the other Transactions.

At the "convention" Dr. John H. Sanders was called temporarily to the chair. Later a permanent organization was effected and Dr. Livingston Dunlap was made permanent chairman. He

The following is a list of the names of physicians at the convention in 1849:

- Dr. Alexander J. Mullen, of Napoleon.
- Dr. Nathan Johnson, of Cambridge City.
- Dr. Vierling Kersey, of Milton, Wayne County.
- Dr. Thomas W. Florer, of Alamo, Montgomery County.
- Dr. John Hunt, of Madison County.
- Dr. Townsend Ryan, of Anderson.
- Dr. R. J. Patterson, of Indianapolis.
- Dr. David Hutchinson, of Mooresville, Morgan County.

3. Those interested in this discussion are referred to obituary of Dr. Cornett, Ind. Med. Jour., Vol. xv, p. 515, also, "The First President of the Indiana State Medical Society,—Letters from Dr. Cornett's son, from the late Dr. John S. Bobbs (Dec. 10, 1849), and from Dr. Wm. A. McCoy, of Madison, Ind."—ib., Vol. xvi, p. 23.

Dr. Charles Wallaee, of Belleville, Hendricks County.

Dr. W. R. Smith, of Cumberland.

Dr. H. V. V. Johnson, of Broad Ripple.

Dr. John H. Sanders, of Indianapolis.

Dr. W. C. Thompson, of Indianapolis.

Dr. Livingston Dunlap, of Indianapolis.

Dr. William H. Wishard, of Johnson County.

Dr. John L. Mothershead, of Indianapolis.

Dr. Alois D. Gall, of Indianapolis.

Dr. C. S. Ramsey, of Indianapolis.

Dr. George W. Mears, of Indianapolis.

Dr. Robert Curran, of Indianapolis.

Dr. Talbott Bullard, of Indianapolis.

Dr. John Nutt, of Marion County.

Dr. Charles Parry, of Indianapolis.

Dr. Andrew M. Hunt, of Indianapolis.

Dr. John S. Bobbs, of Indianapolis.

Dr. David Funkhouser, of Indianapolis.

Dr. Patriek H. Jameson, of Indianapolis.

Dr. John M. Gaston, of Indianapolis.

On the second day, June 7, the committee on credentials reported favorably upon the following named persons, and they were admitted as members:

Drs. Asahel Clapp, John Sloan, S. E. Leonard, P. S. Shields, William Cooper, William G. Sinex, William A. Clapp, William A. Seribner and H. M. Dowling, of New Albany; Chester G. Ballard, of Waveland; Henkle and Farquher, of Wabash; William F. Collum, of Jeffersonville; James S. Athan, of Charleston; James S. Harrison, of Indianapolis; Thomas W. Fry, James Tichnor, Joseph Allen and Oliver P. Mahan, of Crawfordsville; George M. Huggins, of Darlington; William J. Byers, of Frankfort; White, of Prairieton; John M. Boyd, of Thorntown; Samuel J. Weldon, of Covington; Hunt, of Laporte; William T. S. Cornett, James K. Franeis, Richard B. Conn and John Lewis, of Ripley County; Isaac Finley and Homer T. Hinman, of Columbus; Wiley, of Richmond; Foster, James D. Maxwell and Robert C. Hamil, of Bloomington; S. Judkins and J. A. Pegg, of New Garden, Wayne County; Joseph H. D. Rogers, William Davidson, Holcomb, J. W. Mullen and D. F. Mullen, of Madison; Eldridge, Myron H. Harding, Taylor and Jonathan W. Gordon, of Dearborn County; Jeremiah H. Brower, of Lawrenceburg; John W. Moodey, John L. Armington and George W. New, of Greensburg; T. W. Cowgill, Albert G. Preston and H. E. Talbott, of Greeneastle; Joseph C. Ardery, of Decatur County; Jefferson Helm, of Rush County, and Willis W. Hitt, of Vincennes.

The physicians named in the preceding paragraph came to the state convention on the second

day and were received by credentials. Unfortunately, in the hurry and bustle of business, in almost every case the Christian name or initial was omitted. I have sent out numerous letters, besides a request in THE JOURNAL, for assistance in correcting the omissions. Inasmuch as they were present at the first meeting, I felt anxious to preserve their full names. I have succeeded in nearly all. I think some mistakes have occurred. Dr. T. C. Louks, of Prairieton, has diligently sought for Dr. "White," accredited to Prairieton, and is convinced that no physician of that name resided there in 1849. "Sloan" of Crawfordsville appears in the minutes erroneously for Dr. John Sloan of New Albany. I am of the opinion that there are other errors of location. The minutes show the names of eighty-four persons present at this convention.

Sixty years have passed since that body of grand men met in Indianapolis and laid the foundation for our present efficient State Medical Association. Only two of that number are alive today, Dr. Patriek H. Jameson, born in Jefferson County, Indiana, April 18, 1824, and Dr. William H. Wishard, born in Nicholas County, Kentucky, Jan. 17, 1816. Both are residents of Indianapolis.

I am sure that the entire medical profession of Indiana will unite with me in paying this little tribute of respect to these honored men.

At this preliminary meeting a number of practical questions were discussed and acted upon. One was the expediency of establishing a medical journal, and Drs. George W. Mears, Vierling Kersey and Robert Curran were appointed a committee to report some definite action. It was several years before a journal was created, but their action was helpful.

Again, Dr. R. J. Patterson offered the following resolution, which was adopted:

Resolved, That a committee of five be appointed to memorialize the Legislature of the state, upon the subject of Homicidal Insanity—asking the enactment of a law requiring that in all cases where the plea of insanity is set up as an excuse for crime, the question of insanity shall be first and separately tried and decided by a commission of lunacy.

Also, on motion of Dr. John H. Sanders, it was

Resolved, That a committee of five be appointed to memorialize the Legislature, asking them to provide by law for a registration of marriages, births and deaths.

The good seed sown by those early pioneer physicians has borne fruit, and they deserve praise for their forethought.

The state society had not long been in existence until death entered. At the session of 1850 Dr. John H. Sanders, who had acted as temporary

chairman at the first convention, had passed away (April 4, 1850), also Dr. T. W. Cowgill, and the following resolution was passed (*Transactions* 1850, page 7) :

Resolved., That as a society we sincerely feel the loss we have sustained in the recent death of John H. Sanders, M.D., of Indianapolis, and T. W. Cowgill, M.D., of Greencastle.

The society early recognized the necessity for a high standard of preparation for those desiring to enter the profession, as shown by resolution, 1850, page 9:

Resolved., That this society recommend to the members of all local societies, and the profession throughout the state, that they do not receive students into their offices for a less term than three years, including the usual term of public pupilage, and that they require a fee for office instruction, and the use of books, of not less than \$100, and that preceptors should institute frequent examination of their pupils.

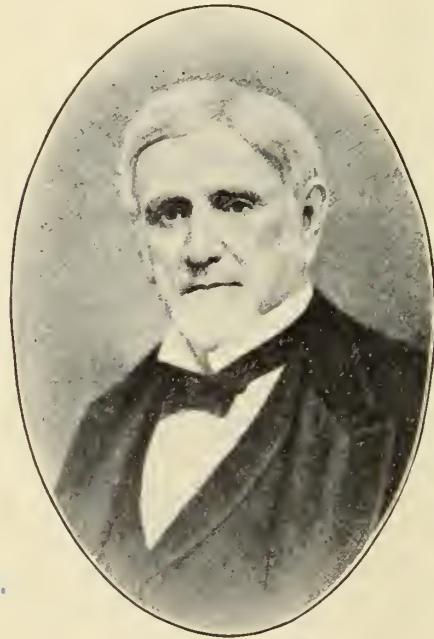
a case-book. The writer was impressed with this advice when, more than forty years ago, he heard the older Austin Flint make the assertion that his success in medicine had largely been due to the fact that throughout his life he had kept a case-book.

The society also stood firmly for the code of ethics and all the principles that it inculcated.

Another resolution introduced at this meeting (1850) is applicable at the present day (page 8) :

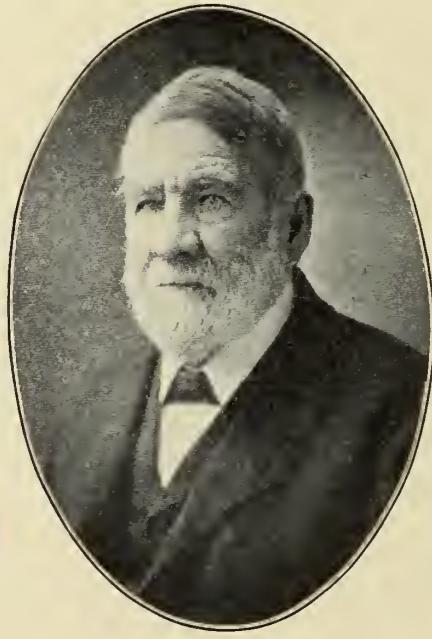
Resolved., That it is expedient for the members of our profession to avail themselves of all suitable occasions to deliver popular lectures on the grand principles of physiology, on which the theory of practice in medicine is instituted, with the view of instructing the public mind and popularizing the regular system of medicine.

Also at this meeting they grappled with problems that, for the sake of science, we all regret they left undetermined:



CAT.

PATRICK H. JAMESON.



WILLIAM H. WISHARD.

Only physicians living who were present at the organization of the State Medical Society, sixty years ago.

It was further resolved that a broad line of distinction between scientific medicine and the various forms of empiricism in vogue in our country should be plainly marked and seen. Physicians were urged to exert their influence with newspaper publishers and druggists to prevail upon them to withhold their aid to such imposture. And they had their troubles in the good old days!

The importance of keeping accurate notes of all important cases and epidemic diseases which might come under their observation was urged upon physicians. This was fifty-nine years ago, and is still applicable to all young physicians of the present day. By all means, young men, keep

Resolved., That a committee be appointed by the president to collect, in a systematized form, facts on the duration of pregnancy and the causes which influence sex.

The eleventh annual session of the state society was held at Indianapolis, May 17 and 18, 1860. On page 62 of that year's *Transactions* may be found a list of the members of the Indiana State Medical Society, with a statement that "This list includes the names of *all* who have been members of the society since its organizations." This is not quite correct, for I have discovered more than a dozen names which have been doubtless accidentally omitted and have added them to the list. I have also corrected some typographical errors, and in a number of

instances supplied the Christian name where I found only an initial letter. As the society was eleven years old at the time of the publication of this list, and there are about 304 names of physicians who were then active in professional life and who now, after half a century has elapsed, deserve this slight recognition, I have decided to reproduce their names.

Comparing the location year by year of these physicians, I was impressed with the large number who had changed their residences in the short period of eleven years, showing a desire for better surroundings. Nearly all "have fallen asleep." Alas, how few would answer to their names at a roll-call today! I think the living could be numbered upon the fingers of two, if not one, hand.

"And the names we loved to hear
Have been carved for many a year on the tomb."

Albertson, Edmund	Canton
Angell, Charles	Pittsburg
Ardery, Joseph C.	Milford
Austin, Thomas K.	New Albany
Ayres, Henry P.	Fort Wayne

Barritt, J. J.	Greenville
Bartholomew, B.	Danville
Beek, E. W. H.	Delphi
Beek, G. G.	Delphi
Beek, John C.	Cadiz
Belles, J. T.	Indianapolis
Bennett, J. W.	Plymouth
Blunt, M. S.	Mt. Vernon
Bobbs, John S.	Indianapolis
Bowman, Charles	New Albany
Boynton, A. G.	Elizabethtown
Boynton, C. L.	Elizabethtown
Bray, Ebenezer	Evansville
Bray, Madison J.	Evansville
Brown, Clay	Indianapolis
Brown, R. T.	Crawfordsville
Brown, Samuel M.	New Bethel
Brower, J. H.	Lawrenceburg
Buck, O.	Dayton
Buck, R. H.	Clarksburg
Bush, O.	Dayton
Bullard, Talbot	Indianapolis
Bullard, W. R.	Indianapolis
Burns, Jesse	Evansville
Butler, A. B.	Richmond
Butterfield, S. H.	Brooklyn
Byers, William J.	Frankfort
Byford, W. H.	Evansville

Carlstadt, F. A.	Evansville
Casselberry, Isaae	Evansville
Carter, F. M.	Frankfort
Catlin, H. W.	Georgetown
Chapman, A.	Alquina
Chestnut, Thomas	Lafayette
Chitwood, G. R.	Connersville
Clark, O. L.	Lafayette
Clapp, Asahel	New Albany
Clapp, W. A.	New Albany
Cogley, T. J.	Madison
Collier, A. G.	Columbus

Cowgill, T. W.	Greencastle
Collings, J. S.	Cicero
Coleman, Horace	Logansport
Collins, Wm. F.	Cumberland
Comingor, J. A.	Danville
Conyngton, John	Mt. Vernon
Cooper, William	New Albany
Cornett, W. T. S.	Versailles
Coe, Henry	Danville
Coe, Z. B.	Kirklin
Crippen, E. H.	Rushville
Crouse, D. H.	Dayton
Curran, Robert	Jeffersonville
Cyms, W. H.	Allisonville
Darrach, G. M.	Indianapolis
Davidson, B. K.	Evansville
Davidson, William	Madison
Day, S. D.	Shelbyville
Davis, J. B.	Indianapolis
Davis, W. H.	Illinois
Davis, S.	Columbus
DeBruler, James P.	Rockport
Deming, Elizur H.	Lafayette
Dillon, A. C.	Rushville
Dieken, James L.	Somerset
Doneghy, John T.	Indianapolis
Dorsey, N. J.	Indianapolis
Dowling, H. M.	New Albany
Dryden, T. F.	North Field
Dunlap, Livingston	Indianapolis
Dunn, J.	Lawrenceburg
Dunnell, D.	Yountsville
Edgerle, G. W., Jr.	Muncie
Elder, Samuel F.	Mt. Auburn
Elder, B. F.	Knightstown
Ellis, C. R.	Hardinsburgh
Ellis, E. W. H.	Indianapolis
Ellis, John	Hardinsburgh
Ellis, Joseph	Bradford
Elliott, Cyrenus	Milltown
Elliott, James H.	Brookville
Elliott, Thomas B.	Indianapolis
Elliott, W. M.	Evansville
Everts, C. C.	Union Mills
Farquhar	Logansport
Farrell, A.	Mt. Vernon
Field, Nathaniel	Jeffersonville
Fishback, Charles	Shelbyville
Fisher, Samuel	Newcastle
Florer, Thomas W.	Alamo
Ford, James	Wabash
Foster, W. C.	Mt. Pleasant
Foster, C. A.	Evansville
Freeman, S. A.	Fort Wayne
French, William H.	Mt. Vernon
Fry, Thomas W.	Crawfordsville
Funkhouser, David	Indianapolis
Gall, A. D.	Indianapolis
Gaston, John M.	Indianapolis
Gerard, Jerome B.	Hartford
Girdner, J. G.	Greenville
Gordon, Jonathan W.	Indianapolis
Graff, George B.	Princeton
Graham, J. N.	Chicago, Ill.
Graydon, R. G.	Greenwood
Gramm, William	Evansville
Green, J. N.	Shelbyville

Green, W. F.	Shelbyville	London
Grimes, Samuel	Delphi	Cumberland
Haines, A. B.	Aurora	Lafayette
Hall, D. D.	Connersville	Morristown
Hannil, Robert C.	Bloomington	New Albany
Harding, M. H.	Lawrenceburg	Crawfordsville
Harrington, S. H.	Richmond	Indianapolis
Harvey, Thomas B.	Plainfield	LaPorte
Harrison, James S.	Indianapolis	Plainfield
Harvey, William F.	Plainfield	Ashland
Hatchitt, James G.	Evansville	Ossian
Haughton, R. E.	Richmond	Martinsville
Heald, J. E.	West Point	Rushville
Heavenridge, A.	Stilesville	Greensburg
Henderson, H. D.	Salem	Belleville
Hervey, J. W.	Germantown	Evansville
Hibberd, J. F.	Richmond	Sulphur Hill
Hickox, H. C.	Aurora	Indianapolis
Hillis, D. B.	Brownstown	Indianapolis
Hinman, H. S.	Columbus	Evansville
Hitt, Willis W.	Vincennes	Evansville
Hoel, John B.	North Hogan	Napoleon
Howard, N. P.	Greenfield	Napoleon
Hunt, John	Madison County	New Harmony
Humphreys, Louis	South Bend	Evansville
Hunt, Andrew M.	Indianapolis	Allisonville
Hurd, A.	Oxford	Greensburg
Hutchinson, David	Mooresville	Indianapolis
Ireland, J. M.	Francisco	Indianapolis
Irwin, John S.	Madison	Indianapolis
Isler, J.	Lafayette	Indianapolis
Jameson, Patrick H.	Indianapolis	Lafayette
Jennings, D.	Lafayette	Somerset
Jessup, D. H.	Rising Sun	Manchester
Jessup, R. R.	Rising Sun	Indianapolis
Jewett, Luther	Lafayette	Indianapolis
Johnson, E. K.	Eagle Village	Indianapolis
Johnson, H. V. V.	Broad Ripple	Indianapolis
Johnson, Joseph	Bakers' Corners	Milton
Johnson, Nathan	Cambridge City	Greens Forks
Johnson, P. Roosevelt	Lafayette	Indianapolis
Jones, David M.	Corydon	Augusta
Kennedy, Levi H.	Belleville	New Castle
Kennedy, S. A.	Fairland	Corydon
Kersey, Vierling	Milton	Indianapolis
Knepfle, Nathan	Indianapolis	Indianapolis
Kitchen, J. M.	Indianapolis	Indianapolis
Kivett, John	Evansville	Lanesville
Latta, M. M.	Goshen	Indianapolis
Leonard, S. E.	New Albany	Indianapolis
Lewis, John	Ogden	Salem
Leslie, Alexander	Petersburg	Plainfield
Link, Harvey	New Albany	Monrovia
Linton, S. M.	Columbus	Lonisville
Lloyd, Frederick	New Albany	North Madison
Lindsley, John	Evansville	Fort Wayne
Lomax, William	Marion	Evansville
Low, Nathan M.	Elizabeth	Castleton
Lynch, M. J.	Indianapolis	Fort Wayne
Martin, M. L.	Middle Fork	Oswego
Mauzy, R. D.	Rushville	New Albany
Maxwell, James D.	Bloomington	Millersburg
Mayo, William W.	Lafayette	Anderson
McClelland, J. S.	Jefferson	Mt. Meridian
McClenanhan, Thomas J.	Anderson	Mt. Meridian
McDonald, D. H.	Indianapolis	Hardinsburgh
		Rushville

Shields, P. S.	New Albany
Sheppard, M.	Columbus
Sherrod, R. W.	Millport
Skinner, John A.	Vineennes
Sloan, John	New Albany
Smelsor, J. W.	Manwaring
Smith, Hubbard M.	Vineennes
Smith, Isaae	Lafayette
Smith, W. R.	Cumberland
Somes, Joseph	Vineennes
Speneer, R.	Monticello
Speneer, W.	Monticello
Spottswood, E. T.	Perryville
Staey, George W.	Warsaw
Stevens, Thaddeus M.	Indianapolis
Stout, Oliver H.	Indianapolis
Sanders, John H.	Indianapolis
Sutton, George	Aurora
Talbott, H. E.	Greencastle
Tate, William	Lawrenceburgh
Taylor, T. W.	Battle Ground
Thomas, M. W.	Franklin
Thompson, W. Clinton	Indianapolis
Thompson, W. E.	New London
Todd, Henry G.	Indianapolis
Todd, L. L., Jr.	Southport
Todd, R. N.	Southport
Town, R. R.	New Albany
Tyler, W. W.	Roanoke
Vail, Joel	Riehmond
Vanderbark, Peter	Knightstown
Viekery, A. M.	Tipton
Walker, G. B.	Evansville
Walker, John T.	Evansville
Walker, Osear C.	Blairsville
Wallaee, A. G.	Indianapolis
Weist, J. R.	New Westville, O.
Welborn, J. C.	Bloomington
Wallaee, Charles	Belleville
Welman, Richard M.	Jasper
Wetherill, C. M.	Lafayette
West, Calvin	Hagerstown
Wileox, J. R.	Evansville
Willard, R.	Warsaw
Wilson, James B.	Salem
Wilson, John R.	Evansville
Wilson, James W.	Rossville
Wilstach, C. F.	Lafayette
Winton, Horace	North Manchester
Winton, Robert	Muncie
Winton, William R.	Wabash
Wishard, William H.	Greenwood
Wolf, J. G.	Morristown
Woodburn, J. H.	Indianapolis
Woodworth, B. S.	Fort Wayne
Wort, Samuel	Brownstown
Wright, John F.	Columbus
Wright, J. Joel	Monrovia
Wright, H. Mansur	Indianapolis
Wyley, D.	Jeffersonville
Yeakle, D. T.	Lafayette

(To be continued).

LYMPHATIC ENLARGEMENT OF THE NECK.

CAUSE AND TREATMENT.

B. F. KUHN, M.D.
ELKHART, IND.

By the term lymphoma is meant any tumor composed of lymphatic tissue, but in a more restricted sense it applies to a condition in which there is a true hypertrophy of one or more lymphatic glands. It is rare and of obscure origin, it attacks one or more glands, and they slowly enlarge without pain or other symptoms. It occurs in young people, is usually associated with anemia, and is liable to be confounded with tuberculosis.

The points of distinction are the absence of softening and the total absence of inflammatory action around the gland.¹

Acute lymphadenitis due to traumatic infection is brought about by the transmission of pyogenic bacteria from the site of the injury to the lymph node; the lymph gland now performing its chief function, that of protecting the body from general infection, arrests the onward course of the invading bacteria, and usually after a time completely destroys them; the enlargement of the gland is brought about by dilatation of the blood vessels, increase in the number of lymphocytes, migration of leucocytes and effusion of serum. Some of the sources of infection are scratch marks in cases of eczema of the scalp, face, or neck, or in pediculi capitis, or from carious teeth and injuries to the gums, perhaps from dental plates. It may follow operations in nose and throat affections.

CHRONIC LYMPHADENITIS.

Under this head are described three forms of lymphatic enlargment:

1. That due to hypertrophied tonsils, adenoids, nasal and pharyngeal catarrh.
2. That due to tubercular infection.
3. That due to syphilis.

Under the first head, in addition to the various throat affections already mentioned, we may have as a cause influenza, termed by Pfeiffer glandular fever. A simple acute cold usually causes enlargement of the cervical glands, and, if repeated often, will finally cause permanent enlargement, due to an increase of the connective tissue.

It is said that all the lymph glands meet with more or less infection, and in overcoming it are more or less enlarged, so that a strictly normal lymph node is found only in the very young.²

From the foregoing it is evident that a certain degree of enlargement is unavoidably associated with the greatest activity of the gland in overcoming infection, but, on the other hand, it is probably true that with an excessive degree of enlargement the gland begins to lose such power.

The second form, or tubercular adenitis, is by far the most common lymphatic enlargement, and is the subject of an endless amount of literature; it probably occurs in some cases without being preceded by inflammatory action, but it is undoubtedly true that in a vast majority of cases it is preceded by other forms of infection. Donahue of Boston, after a careful study of three hundred cases, says: "Enlarged glands of the neck are not primarily tubercular." However, by inoculation into susceptible animals, either the T.-B. or its spore are found to be present in almost all cases of chronic enlargement of the glands.

Cornet, by experiments on animals, showed that the T.-B. may pass through the mucous membranes without leaving any demonstrable lesion; he brushed the T.-B. over the nasal mucous membranes of healthy animals and later demonstrated their presence in lymph nodes that appeared.

Goodale and Henderson have shown that carmin and other powdered substances may be absorbed by healthy mucous membranes and carried in the lymph stream.³

While the lymph nodes are by far more frequently infected with tuberculosis than any other tissue, they, at the same time, show great power of resistance, for glands that have been infected for a long period often show the absence of bacilli, which have evidently been destroyed, and the presence of the more resisting spores. Furthermore, rabbits or guinea-pigs inoculated from them show a much less virulent form of the disease than when inoculated with virus from other sources.⁴

The disease usually remains localized to the glands affected, this being brought about by two processes—first, by occlusion of the efferent lymph vessels, and, second, by the bactericidal action carried on within the lymph nodes.

While the frequency of involvement of lymph glands might be taken to indicate a great susceptibility, such is probably not the case; on the other hand, the lymph glands are undoubtedly the most resistant of any tissue of the body, and are the most often affected, simply because they are so placed as to first meet the invading organism. Another peculiar phenomenon is that,

while children show the greater tendency to tubercular disease of the lymph glands, they at the same time show greater power of resistance and more frequently recover from it.⁵

Eisendrath attributed the greater frequency in children to the fact that they are more liable to inhale dust from the floor containing the bacillus.⁶

This hardly seems sufficient as an explanation, as the greater susceptibility of the young to all forms of tuberculosis should be considered as well as the great prevalence of throat affections in children.

It is worthy of note in passing that the theory of peripheral tubercular infection of the lymph stream by the tubercle bacillus is not accepted by all observers, as, for instance, Cheyne of England maintains that the nodes have their vital resistance lowered from the absorption of virus from the parts that drain into them and are thereby made suitable for the lodgment and growth of the T.-B. circulating in the blood.⁷ The source of infection may be the tonsils, adenoids, carious teeth, tubercular lesions of the nasal or buccal mucous membranes, or perhaps from eczema of scalp, face or neck; in fact, they may gain entrance through any source from which we may get an acute infection, but a careful review of the subject justifies the opinion that by far the greater majority of cases are infected through the tonsils and adenoids.

Charles N. Dowd of New York has observed in a study of 100 cases that 86 first showed enlargement of the glands that directly receive the throat infection—namely, those at the extreme upper end of the deep cervical chain.⁸ A certain portion of the cases may, through healthy mucous membranes, become infected as already mentioned, and, again, others may become infected from tubercular lesions of the mucous membranes, which subsequently heal and leave the glands as the only diseased tissue present; yet quite a large number on careful investigation will show the presence of the T.B. or spores in the tonsils or adenoids. Lewin of Breslau examined 200 cases of pharyngeal adenoids, finding the T.-B. present in five per cent.; he also collected 900 similar observations which gave the same per cent.⁹

Diculafoy inoculated guinea-pigs from the faecal tonsils of sixty-one children, apparently non-tubercular, and in eight cases, or 16.4 per cent., tuberculosis developed, and from thirty-five inoculations from adenoids there were seven, or 20 per cent., infections.¹⁰

During the first part of the second stage of syphilis the cervical glands may become en-

larged; in fact, it is said that all the lymphatics in the body enlarge at this time. This is more likely to affect the occipital group of those posterior to the sterno-mastoid muscle; there is usually no tenderness or evidence of inflammatory action.

TREATMENT.

In lymphoma a course of arsenic and other tonics should be given along with thyroid feeding; a change of climate may be of benefit and, if possible, it should be made; should the gland or glands continue to enlarge or be annoying or unsightly they should be removed, which can be easily done, as they shell out from the loose connective tissue with little difficulty.

Acute lymphadenitis should be treated by keeping the patient quiet in bed; the inflamed part may be smeared with a mixture of the extract of belladonna and glycerin, and over this hot fomentations applied, changing them frequently; poppy-head or lead and opium solutions may be used.¹¹ At the same time the source of the infection should receive attention and, if a suppurating wound, should be carefully drained and made aseptic. The injection of a few drops daily of a 3 to 5 per cent. solution of carbolic acid is recommended; but, if all measures fail and it is evident suppuration has occurred, incision should be practiced and all dead tissue curetted away and pure carbolic acid applied to the surface. Should the cavities be slow to heal the application of Peruvian balsam should be made. Some have advocated dissecting out the entire abscess, but this has not met with general approval. Great care should be exercised in avoiding important structures in incising the abscess. Should there be evidence of any constitutional condition favoring the formation of glandular abscesses it should receive appropriate treatment.

By chronic simple hyperplastic lymphoma mentioned in the outline is probably meant those cases that have been repeatedly acutely infected from diseased tonsils, adenoids, catarrh, etc., until they remain permanently enlarged, but do not contain the tubercle bacilli or other bacteria; such cases can not be differentiated from tubercular glands, which will soon be considered.

The tendency at the present time seems to be more and more in the direction of considering almost all cases of chronic enlarged glands of the cervical region as tubercular. Glands that were formerly considered as simple hyperplastic ones are now looked on as tubercular.

These cases as they come to the physician have proven very perplexing problems, for any line

of treatment as ordinarily carried out has been too often devoid of results, and the case goes from one physician to another until they are either removed by a partial operation or the patient decides to let them alone and they go untreated until perhaps a mixed infection develops and one or more glands suppurate and leave a discharging sinus which is very slow to close and when it does finally heal leaves a very unsightly scar.

As to the result under medical treatment, the work of Dumme of Berne, in the Hospital for Children, is often quoted (Attridge of Detroit). His observations extended over a period of twenty years and included 692 cases of enlarged lymph glands. He showed that 21 per cent. developed pulmonary tuberculosis, 8.2 per cent. tuberculosis of the intestines, pia mater, the kidneys and epididymis.

Wolgemuth is quoted as curing 24 per cent. of a series of cases by medical treatment; no mention is made of the length of time the disease had existed prior to the beginning of the treatment.

Von Noorden investigated 194 cases from three to twelve years after operation and found 26 per cent. of lung tuberculosis and 16 per cent. situated in other organs. Blos says those treated by excision do much better than when treated by incision; he mentions seventy-six cured cases, and says that in no single instance was it brought about by incision alone.

Karewski refers to the more favorable prognosis in children, and mentions 128 cases observed from one to six years after operation, with only three deaths from tuberculosis. Charles M. Robertson of Chicago contributed a valuable and striking paper on this subject before the American Medical Association in 1906, and some of the points are too valuable to pass without mention. One contention of his, that the lymphatics often carry the tuberculosis directly from the deep cervical chain to the apex of the lung might be seriously questioned, but the fact often demonstrated that there was frequently an opening sufficiently large to admit a probe from the site of the enlarged glands directly to the tonsil is worthy of thought at least. His study of the tonsil showed the presence of tubercles in 8 per cent. of the cases and all questionable cases were eliminated. He found the tubercles always located at the bottom of the crypts, and only in the crypts pointing directly upward; the crypts emptying downward or inward were almost always free. He describes four crypts emptying into the supratonsillar fossa,

whose anatomical arrangement is quite uniform in all cases.

The treatment of enlarged cervical lymph nodes should in most cases consist of both medical and surgical means. While a certain portion of the cases will yield to medical and hygienic measures, others will require a surgical operation to aid in eradicating the trouble. Of the latter it should be the rule to supplement operative treatment by other measures that will aid the system in overcoming any infection remaining, as in the most thorough operation it is not possible to know that the last infected gland has been removed.

The medical and hygienic treatment should consist of practically the same measures as are carried out for the treatment of tuberculosis of the lungs or other parts of the system—plenty of pure air and sunshine, with properly regulated exercise; an abundance of nourishing food, together with the administration of tonics such as the hypophosphites, perhaps combined with arsenic; the use of creosote or some of its various derivatives are believed to be especially applicable here as in the pulmonary form of the disease; the syrup of the iodid of iron is also said to act very favorably in this condition. In cases where softening has not occurred medical measures may often bring about a cure, but where softening has taken place it will be necessary to resort to surgical means. In those cases where chronic enlarged glands have become infected by pyogenic bacteria we have then to deal with what is practically an acute glandular abscess and it should receive treatment as outlined heretofore. In chronic enlargement, where softening and caseation have taken place, it may be advisable to incise and evacuate the contents; sometimes the caseous material will have broken through the gland wall. The objection has been urged to this operation that it is liable to spread the infection and that it is not curative. If properly carried out there is probably no particular danger of infecting other organs, but it certainly is not curative and must therefore be looked upon simply as a means of getting rid of one or more glands that may be very large or unsightly. A small incision should be made directly over the softened gland and extended until it enters the cavity. The contents may be evacuated by pressure, after which a curette is introduced and the glandular tissue completely scraped away so as to leave only the capsule. This should receive a thorough swabbing with some effectual germicide, after which it should be packed with iodoform gauze. As an application to the cavity Gould strongly recommends the chlorid of

zinc in the strength of forty grains to the ounce.¹²

This operation is a very safe one and is unattended by any shock or discomfort, but is very limited in its results. When enucleation is considered it is in the hopes of completely eradicating the disease, and therefore a few simple rules applicable here are to be considered. In view of what has been said heretofore it is plainly evident that almost all cases are secondary and, unless the primary focus can be removed, we are doing the patient harm rather than good by removing the enlarged glands. It is more important to treat successfully the site of the infection than to remove the glands. Many cases will undergo resolution if diseased tonsils, adenoids, or other abnormal structures are properly dealt with. They will quickly resolve if the source of infection is removed before the glands become disorganized.¹³

In exceptional cases the T.B. may reach the glands through normal mucous membranes, but this should be looked upon as very unusual, and in other cases the primary focus may have become perfectly normal, in both of which the glands may be dealt with as though they were the primary seat of the disease. Should extensive tubercular infection of other tissues of the body be present the operation should not be done, as we probably could not avert a fatal outcome, even though we were successful in eradicating all the diseased glands. Should there be reasons why a thorough dissection should not be done individual glands may be shelled out by short incisions made directly over them, or a group may be reached through a single incision. Some of the favorite sites for such incisions are just in front or just behind the sternomastoid, either at its upper or lower end, making the cut in a longitudinal direction.

To reach the nodes along the subclavian vein an incision just above the clavicle and extending forward from the anterior edge of the trapezius is very useful.

In planning an operation for complete removal of diseased glands it is usually only necessary to arrange the incision so as to deal with the deep cervical chain and the external jugular and other groups along the anterior and posterior edge of the sterno-mastoid muscle, as the five primary groups are seldom affected. Dowd's showing 86 per cent. affecting first the deeper glands led George B. Wood to conduct a series of experiments to clear this point up. By injecting the tonsil he found they emptied directly into the internal deep gland or tonsillar gland;

he also showed that the pharyngeal tonsil or adenoids emptied into the external division of the deep chain posterior to the sterno-mastoid.¹⁴

This explains the well known fact that the superficial groups are seldom affected, and also supports the contention that most cases are infected through the tonsils and adenoids.

In considering the operation of complete extirpation of the cervical glands the incision becomes of great importance, for it is desirable to avoid unsightly scars and, at the same time, so arrange the cuts as to give good exposure of the important structures. The incision most commonly employed is one extending parallel to the sterno-mastoid, either directly over it or at the anterior or posterior border. From the upper end another cut may run forward along the lower edge of the jaw, thus forming a flap that may be turned forward from the lower extremity of this primary incision. One may be carried backward along the upper edge of the clavicle, thus forming a triangular flap that may be loosened and turned backward. This incision is made use of by Eisendrath and gives a very good exposure of the deep structures of the neck, especially if the sterno-mastoid is cut and turned out of the way.¹⁵ There are two serious objections to this incision. First, Kocher, long ago, pointed to the fact that longitudinal cuts on the neck leave scars that tend to stretch and thicken, and the one over the sterno-mastoid usually becomes very unsightly. Another objection is the pointed ends of the flaps will retract and, if an attempt is made to keep them in place by sutures, their circulation at the point will be so badly interfered with that they will slough. The latter objection can in a great measure be overcome by joining the cuts by a curved incision so as to do away with the sharp angle of the flaps. Dowd mentions this point, and I am informed Ochsner practiees it.

Dollinger, of Budapest, has operated on one hundred cases by making a single vertical incision just back of the hair line, but this gives a poor exposure, and it is said that even here the cicatrix thickens and becomes very noticeable. As Kocher has shown that incisions in a transverse direction or following the natural creases of the neck produce little scarring, a great many take advantage of it in performing this operation. Charles N. Dowd makes an incision just below the angle of the jaw extending back to and sometimes across the sterno-mastoid; another cut is made above the clavicle. Should these

two incisions not give sufficient exposure the lower one may be extended back of the hair line and curved upward so the latter part may correspond to the Dollinger incision. Should this still be insufficient for our purpose it can be extended still higher and curved forward, meeting the first incision back of and below the ear. This will form a flap from two and one-half to three inches in width and give a very good exposure. Usually by retracting the sterno-mastoid muscle, first forward and then backward, the deep cervical glands can be reached and removed, but it may become necessary to divide this muscle, and when such is the case it should be divided either above the insertion or below the exit of the spinal accessory nerve. Dowd divided it sixteen times, with no marked ill effects following.

The spinal accessory nerve requires special attention, as its division without subsequent suturing will cause a partial paralysis of the trapezius muscle and a consequent drooping of the shoulder which may decidedly disable the patient. Before its entrance into the sterno-mastoid muscle it usually lies between the enlarged nodes, and if they are taken out en masse it will surely be injured. After its exit from the sterno-mastoid muscle and before entering the trapezius it is much exposed, as glands are liable to be matted together in this region. It usually leaves the posterior border of the sterno-mastoid about midway between its two ends. The lower fibers of the facial nerve may be injured, but the following points carefully observed will avoid it: The transverse incision should be not less than three-quarters of an inch below the angle of the jaw; after cutting through the skin it is best to stretch it down a little and divide the platysma at a slightly lower level. The nerve fibers to be avoided lie between the platysma and the deep cervical fascia, which can be retracted along with the muscle. The thoracic duct is to be carefully avoided, and it should be borne in mind that it is possible for it to extend above the border of the clavicle as much as two inches.¹⁶ However, in the hands of the most careful surgeons it may not be recognized and an injury become evident some time after the operation by a free discharge of milky fluid from the wound.

The experience of surgeons has demonstrated this is not by any means a hopeless condition, as most cases have recovered (30 cases in Konigsburg Clinic, 2 cases of death). It is treated precisely as an injury to a blood vessel, either by

ligature, suture of tissues, artery clamp, or by packing.¹⁷

The nodes are sometimes firmly adherent to the internal jugular vein and difficult to separate without doing it injury. When the adherent glands are pulled upon, the lifted margin of the vein may resemble fibrous tissue and be incised by mistake.

Leaf has shown that where the nodes are firmly adherent to the vein there is often a good-sized vein emptying directly into the jugular, and removal of the node is followed by free bleeding. Should the jugular be injured it may be possible to repair it by a catgut suture, but if cut or torn across it should be ligated. Ligation of one jugular vein is comparatively safe, although at least three deaths have been reported from it. One thing that adds to the seriousness of it is that it is frequently at an inaccessible point and serious hemorrhage may occur before a ligature can be placed.

In malignant disease it is probably best to remove the glands with most of the surrounding tissue, but here this is to be avoided because of the likelihood of injury to important nerves. The wound should be thoroughly cleansed by an antiseptic wash and closed with drainage, making use of interrupted subcuticular sutures to lessen the scarring. The prevention of embolism and a number of other important points have been passed over for the purpose of shortening this paper, which has undoubtedly become very tiresome ere this.

In conclusion, then, I would say that enlargement of the lymph nodes of the neck shows a distal infection, just as does enlargement of the popliteal, inguinal, the axillary or the epitrochlear lymph nodes. By far the greater number of cases have as the source of the infection the tonsils and adenoids.

In most all cases in order to obtain a cure from removal of the enlarged glands it is absolutely necessary to remove or cure the original infection, and in most cases this means a removal of the adenoids and extirpation of the tonsils.

BIBLIOGRAPHY

1. Gould, A. Pearce: Int. Text-Book, 1900, ii, 125.
2. Adami, J. George: Keen's Surgery, 1906, i, 210.
3. Dowd, Charles N.: Annals Surgery, xlii, 56.
4. Anders' Practice, 1906, p. 274.
5. Dowd: Annals of Surgery, xlii, 53.
6. Surg., Gynecology and Ob., January, 1906, p. 37.
7. Quotation by Garrish: Keen's Surg., 1906, ii, 610.
8. Annals of Surgery, xlii, 55.
9. Annals of Surgery, xlii, 55.
10. Annals of Surgery, xlii, 55.
11. Gould: International Text-Book, 1900, ii, 117.
12. Gould: International Text-Book, 1900, ii, 122.
13. Sheldon: Indications for Operative Treatment, 1906, p. 303.
14. Am. Jour. Med. Sciences, 1906, p. 620.
15. Surg., Gyn. and Obstetrics, January, 1906.
16. Hamilton, John B.: International Text-Book, 1900, i, 918.
17. DeForest, Henry: Annals of Surgery, Vol. xvi.

EXOPHTHALMIC GOITER.

SYMPTOMS AND TREATMENT.

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Exophthalmic goiter is peculiar to a marked degree in its absence of pathological changes in the tissues of the body, while its symptoms embrace a characteristic disorder of every physiological function of the human organism at some time or other during its chronic course.

There are five cardinal symptoms of this disease: Enlargement of the thyroid gland, prominence of the eyeballs or exophthalmos, increased action of the heart, with palpitation of the vessels, and general nervousness, with the fine rhythmic tremor.

The most constant and important symptom is the tachycardia. The rate of the heart beat is almost always over 90, and may even reach 250, but is most commonly 110 to 150 to the minute, being present whether the patient is active or at rest.

With the tachycardia is palpitation, which may be very distressing, sometimes constant, sometimes intermittent. Rarely the tachycardia may be absent, when, as Emerson has shown, it can be produced by a few doses of thyroid extract. The heart varies in size in most cases and is dilated in 30 per cent., in accordance with the severity of the disease, the right ventricle being especially affected. The apex impulse is more marked than normal and is diffuse, even at times affecting the whole chest wall. The heart sounds are accentuated and murmurs may be found at apex or base, which are organic and their presence accidental, or, as Barker claims, due to the excited and accelerated action of the heart. Murmurs are also heard, not only over the vessels of the neck, but over the brachial and femoral arteries. The radial pulse is small and quick, sometimes dirotic, and in severe or late cases irregular or intermittent. There is a capillary pulse and Beeker's retinal pulse and Gerhardt's liver and spleen pulsation are sometimes observed. Slight edema of the legs, hands and eyelids is seen in severe cases and varicose veins and hemorrhoids occur. There may be epistaxis, bleeding of the gums, and even pulmonary hemorrhages. The blood pressure may be low, but is usually above normal and sometimes high. Blood examination shows a decrease in the red cells and an increase in number of lymphocytes and a decrease in polymorphonuclear forms, the total number of leucocytes being normal or below. Albert Kocher considers a relative increase in the number of lymphocytes as a favorable sign.

The thyroid gland is appreciably though not greatly enlarged in most cases—some authors claim always so—and precedes other symptoms in one-fifth of the cases. Undoubtedly in some cases no enlargement can be determined by palpation on account of increased posteriority or the hypersecretion may be due to accessory glands. In early and acute cases the gland is soft; in chronic cases it is firmer and more elastic, and the surface may be granular from lobular hyperplasia. In typical cases the tumor is vascular, pulsates and there is a palpable, systolic expansion. Murmurs may be heard at the entrance of the vessels into the gland, and a thrill is often plainly felt. The struma can be partially reduced by pressure, returning to its original size when the pressure is removed. The degree of hypertrophy seems to have no relation with the amount of intoxication in any given case. All varieties of goiter, from cystic to malignant, may be associated with Basedow's disease.

The exophthalmos is not present in about one-third of the cases, and in many others is slight in degree, but is rarely absent in well marked cases. When well developed it is striking and gives a staring look, which may appear fierce or frightened, and is increased by emotion and excitement. The exophthalmos is a real protrusion forward of the eyeball, and must be distinguished from a mere widening of the palpebral fissure. The recti muscles may be visible, and cases are recorded where the eyeball became dislocated from the socket. Conjunctivitis and even ulcers of the cornea sometimes develop, due to inability to bring the eyelids together. The pupils are usually normal and react to light, but may be dilated or unequal. The exophthalmos may be unilateral or may vary, and the gland may be enlarged on one side and the exophthalmos be present on the other.

From the standpoint of diagnosis the muscular tremor ranks in importance with the rapid heart action and the struma. It is a rapid, rhythmical motion, with eight or nine vibrations to the second, twice as rapid as *paralysis agitans*, and is best brought out by spreading the fingers apart and holding the hand up to the light or by placing the arm at right angles to the body with a pencil between the fingers. The tremor is usually limited to the muscles of the extremities and may be unilateral, but occasionally the muscles of the trunk are affected and the whole body trembles. It is not increased by voluntary movement, but is exaggerated by excitement. Murray noticed the tremor in 111 out of 120 cases. Other disturbances of the muscular sys-

tem are sometimes present, such as paresis, paralysis or atrophy, and sudden giving way of the legs may be an early symptom.

The nervousness of these patients is in very marked contrast with the apathy and even torpor of myxedema, and may even resemble hysteria, and it must not be forgotten that the two diseases are sometimes associated. There is marked irritability and unstableness of the nervous system, patients being restless, excitable and easily agitated, rapidly passing from one mood to another, at one time being exceedingly gay and in a few moments passing into a condition of despair, or even melancholia. These patients may suffer severely from headache, vertigo is less common, and delirium rare. The psychic symptoms become more and more pronounced and sometimes pass over into actual insanity, which is likely to be a depressive mania or paranoid in type. This is claimed by some to be a coincidence, but many cases are reported which developed insanity in which the insanity and exophthalmic conditions were improved or even disappeared together.

Disturbance of digestion and loss of weight, even 40 to 50 pounds in a few weeks, are commonly present, there being not only a decrease in the stored up fat of the body but also atrophy of the muscles accompanied by a loss of strength with fatigue on slight exertion. The body weight curve is an index to metabolism and the intensity of the disease. Vomiting is present in 50 per cent. of the cases, usually late, but may be one of the first symptoms of which the patient complains. Diarrhea is also a very common symptom, occurring in about 50 per cent. of all cases, usually intermittent in type and of circulatory origin due to vaso-dilatation. Rarely with great disturbance of digestion, accompanied even by occasional vomiting, the appetite may remain good and the patient continue well nourished, and even improved in physical condition.

The skin is smooth and moist, in marked contrast to its condition in myxedema. Excessive sweating is present in 90 per cent. of cases, accompanied by hot flashes without any increase in body temperature, and may be accompanied by polydipsia. Irregular erythema of the neck and upper chest may be present, and various pigmentations of the skin have been reported in about 40 per cent. of cases, either in patches or general, even resembling pernicious anemia, or Addison's disease. There may be loss of hair and atrophy of the nails in a few cases.

There are few symptoms referable to the respiratory tract. In a few cases there is dyspnea, usually seen late, and cardiac in origin, or due

to anemia. A short, deep, nervous cough is sometimes present. There is nothing constant in the changes in the urine. There may be polyuria, glycosuria and albuminuria. The total nitrogen content is increased, due to the increased metabolism.

Menstruation is as a rule disturbed. There is usually a decrease, but the flow may be more profuse than normal. Sexual desire is lessened and there may be impotence. Hearing, smell and taste are usually normal.

Several additional signs are sometimes of use in doubtful cases:

1. Failure of the upper eyelid to follow the eyeball normally in looking downward.—(V. Graefe.)

2. Retraction of the upper lid on straightforward vision, revealing some sclera above the cornea.—(V. Stellwag: Dalrymple.)

3. Infrequent and incomplete involuntary winking.—(V. Stellwag.)

4. Inability to hold the eyes in position of convergence.—(Moebius.)

5. Difficulty of evertting the upper lids.—(Gifford.)

6. Pigmentation of the upper lids.—(Jellinek-Rosen.)

7. Failure of forehead to wrinkle on looking up.—(Joffroy.)

8. Epiphora or overflow of tears.

8. Tremor of eye-balls.

10. Subjective feeling of pressure behind the eyes.

11. Abnormal dryness of eye.

The prognosis in Basedow's disease is uncertain. Some cases develop rapidly and get well rapidly, but the general tendency is to run a chronic course with periods of temporary improvement, and periods of several years must elapse before a cure is certain. In a few cases the disease subsides gradually of its own accord, but with some symptoms partially remaining and eventually relapsing. The disease may progress more or less slowly, with a fatal termination. The end is marked by a great increase in the nervous manifestations, great restlessness, hallucinations and active delirium, often requiring restraint. The temperature runs up to 104 or 105 and the pulse and respiration are much increased, and vomiting and diarrhea appear. There is great sweating and perhaps jaundice. Convulsions may occur or the patient pass into a comatose state from exhaustion.

MEDICAL TREATMENT.

The treatment of exophthalmic goiter is partly empirical and symptomatic and partly based on

different theories as to its cause. The nervous symptoms being ever present, there is unanimity of opinion as to the general management of this disease. The vast majority improve with rest, which must be both mental and physical and suited to each ease by individual study. In some cases rest in bed is essential, while others must be allowed to sit up and even take mild forms of exercise in agreeable environment protected from excitement in order to preserve a proper mental state. The diet must be carefully regulated, the food nourishing and pushed to the full digestive and assimilative power to prevent failing nutrition and loss of weight. Much good is sometimes gained by the use of the ice-bag intermittently over the praecordium and the struma. Galvanism through the goiter and in the direction of the pneumogastric nerve is used with cold salt glows and massage.

William Hanna Thompson believes "that proper medical treatment furnishes the best chances for recovery from the disease in severe cases and, of course, therefore, in the milder forms." He despairs only of those patients where uncontrollable vomiting and diarrhea have developed in patients already much weakened by the disease. His treatment is based on the theory that the condition is the result of an intestinal toxemia, and consists of careful diet, purgation and intestinal antiseptics. He writes as follows: "That a poison generated in the alimentary canal normally finds in the thyroid a gland which can neutralize it; excessive amounts of this poison in the blood excite the thyroid into over-action and thus often, not always, lead to its hypertrophy. The goiter, therefore, is secondary to a blood condition, just as hypertrophy of the spleen is, and to get rid of it and of all its other accompaniments we must attend to the intestine."

He advises "positive and detailed directions as to diet. Butter meat is never to be allowed. Fish, if not too oily, as salmon or smelts, are allowed; oysters, clams and lobsters are forbidden. Poultry sparingly, but not at night. Not more than one egg a day, best at breakfast. Of game I only allow quail and partridge, but no dark meat birds. The standard article is milk, which alone will cure many severe cases of Graves' disease if it be taken as the Bedouins and Tartars of Asia take it, as well nigh their only food. A Bedouin would no more drink fresh milk than we would eat a raw potato. He always ferments it first, with yeast as a ferment. These preparations are now quite generally used under the names of Kumyss, Matzoon, Zoolak, etc. Peptonized milk will answer, and

raw milk, if ever taken, should be half diluted with Vichy or limewater. Next to living on milk the patient should be a vegetarian, for vegetable albumin rarely disagrees. Bread, particularly if crusty, and rice can be taken *ad libitum*, but hot soda biscuits are nearly poisonous and starchy crackers are to be avoided in persons much troubled with headaches. Beans (except string beans) and peas are wholly inadmissible. I rule out asparagus and, to a less degree, spinach. Of the cereals oatmeal is forbidden, but others in common use, particularly hominy, are recommended, as they are so often taken with milk and cream. Nearly all the fruits are beneficial except uncooked apples and strawberries."

Thompson also highly esteems medical treatment. His routine is as follows: "To every patient I recommend 30 grains of sodium phosphate, taken at the beginning of each meal, and a blue pill or other mercurial laxative twice a week. Then a course of intestinal antiseptics is kept up for months at a time. I usually begin with sodium salicylate and sodium benzoate of each 10 grains, an hour after each meal. At bedtime I give a capsule containing naphthalene 3 grains and sodium benzoate 6 grains. After a time I substitute a capsule containing phenol bismuth and ammonium benzoate, each five grains, of which two should be taken an hour after meals." He further advises permanent abstinence from butcher meat, for, as in diabetes, relapses are far more difficult of relief than the original attacks.

Recently some very favorable reports have been given of success with *x-ray* treatment. Freund, of Germany, reviews a dozen authors and reports five cases. The Röntgen treatment induced unmistakable benefit in all, the gland reduced in size and the nervous symptoms lessened. The patients all increased in weight. The soft, vascular tumors are the most easily influenced and the prognosis is better the more recent the case. He advises a moderately soft tube 20 cm. distant, exposure 8 to 10 minutes; one to three exposures in a week.

Many drugs have been used, but, aside from tonics, such as iron for the anemia and sedatives for nervousness, have not yielded uniform results. Climatic change is sometimes of benefit, avoiding high altitudes if the tachycardia is marked.

Thyroid extract, iodin, potassium iodid and iodothyron are all harmful and should not be used. Intraglandular injections are to be condemned as dangerous.

On the theory which seems most popular, that Graves' disease is caused by a hypersecretion of the thyroid gland, have come some new pre-

parations which are supposed to have an antitoxic effect. These preparations are of two different sorts. First, those produced from animals from which the thyroid gland has been removed, and, second, those from animals to which normal or pathologic glands have been administered. These include the milk, either natural or desiccated, from thyroidectomized animals. The antithyroidin of Moebius, the blood serum of thyroidectomized sheep, the thyrodetin, the desiccated blood of thyroidectomized sheep. Very recently Rogers and Beebe have given some very favorable reports from a serum prepared by the use of the nucleoprotein and thyroglobulin from normal and pathologic glands. While the reports on the use of these preparations are favorable, they have failed in some cases in the hands of the originators, and it is too early to even estimate their value, but they give some promise.

Heineck, in an exhaustive recent paper on this subject, takes a most pessimistic view of the medical treatment of exophthalmic goiter. He says: "All medical treatment except the administration of belladonna is largely symptomatic"; that "arsenic and iron are given for the anemia; bromids and opium for nervousness and restlessness; digitalis, strophanthus, etc., for the tachycardia; that all are palliative, and not one ever curative"; that "all forms of medicinal treatment, hygienic, dietetic, medicinal, organotherapy or electrical in nature are unsatisfactory and disappointing"; that "since a general toxemia, the result of quantitative or qualitative changes, or both, in the secretion of the gland, most satisfactorily explains the disease, removal of a portion of the gland gives the most satisfactory and permanent result." He advises "When, after three months' well-conducted, appropriate, medical treatment, the patient's condition is not markedly improved, surgery should be resorted to."

On the other hand, Robert B. Preble says, "the majority of cases should continue to be handled by medical methods, for one must always remember that the natural evolution of the disease is toward recovery."

DERMATITIS DITROOPENOTUS AUREOVIRIDIS.

SYNONYM.—STRAW ITCH.

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DEFINITION.—A dermatitis caused by the ditropenotus aureoviridis and characterized by an urticarial eruption, surmounted by a small whitish vesicle marking the center of the wheal, and

attended by intense itching and constitutional symptoms, such as elevation of temperature, rapid pulse, general malaise, anorexia and enlargement of the superficial lymph glands. In severe cases albumuria obtains.

In May, 1909, a very strikingly strange skin disease presented itself in this and surrounding country in epidemic form. Through the press notes it seemed to be quite general over the northern part of the United States, limiting itself to the wheat growing sections.

The people generally affected were farmers and those living in small villages or towns where straw is used in beds, under carpets and

perforations were through the bark of the straw, in the region of the joint, generally about two inches from the joint. The perforations were about the size of a small pinhole and ranging in number from ten to thirty in a straw. Upon section of the straw a small black fly was found under many of the openings through the bark.

Several flies were examined to ascertain if they possessed a piercing proboscis, and while observing one which had just been taken from under the bark of the straw, through which there was no perforation over the fly, a small mite was observed crawling over the dead body of the fly.

CASES OF DR. L. T. RAWLES.

No. of Cases in Family.	Sex.		Temperature and Pulse,		Itching.	Straw in House and Beds.	Finding of D. A. in Straw.	Wheat-straw Worm in percentage of straws.	Nausea.	Lymphangitis.	Discoloration.	Complications.
	M.	F.	T.	P.								
6	1	5	Not taken.	Moderately severe.	Yes.....	Yes.....	3%	No.....	No.....	Yes, brown spots on back of child.	B l u i s h	None.
3	2	1	Not taken. Child, 101	Vry severe on woman and child; moderately on man.	Yes.....	Yes.....	2%	Nausea and vomiting in child.	In child.			
4	1	3	Male, 99 Females, 88 99 101 100 6	90	Intense.... In beds and under carpets.	Yes.....	6%	In all cases.	In all cases.	Brown spots marking locations of wheals.		Three small cutaneous abscesses and eczema.
2	1	1	Male, 99.6 Pregnant .. Female, 96	101.4 99.8 to 103	110 96 to 120	Intense.... Yes, and under carpets.	Yes.....	4%	In all cases.	In both cases.	Brown spots.	Pruritis, eczema and subcutaneous abscesses; albuminuria.
7	3	4		101	110	Intolerable; worse at night.	Yes, and under carpets, large numbers.	10%	In all cases.	In all cases.	Brown spots.	Albuminuria in 2 cases; 3 subcutaneous abscesses.
1	1		Not taken.	Moderately intense.	No; was hauling straw of last year's crop.	Not looked for.	Not looked for.	No.....	No.....	Brown spots.	No.	
5	3	2	101 100 100.2 102.4	94 90 96 100	99 90	Intense.... Yes.....	Yes.....	3%	In all cases.	In all cases.	Bluish spots.	None.
9	6	3	Not taken.	Moderate..	Yes.....	Not looked for.	Not looked for.	No.....	No.....	Brown.....		None.

around stables to bed stock. Horses and cattle have been seen with a skin disease almost identical to that seen in man. The following incident led to an investigation as to the probable etiology:

A family had cleaned house, refilled the straw ticks of their beds and placed fresh straw under the carpets, and in about one week the family had developed this peculiar skin disease. In the beds was found a small, black fly, about the size of an ordinary gnat, which at first it appeared to be, but closer observation revealed that it was not of the gnat family. Upon examination of the straw it was found that a large number of the straws were perforated; these

placing the bodies of several flies under the microscope and using a $\frac{1}{4}$ -inch objective and a No. 5 eyepiece, it was found that on nearly all flies over which the bark was intact a small parasite could be detected, these mites varying in number from two to four mites to each fly. Upon furthering the observations it was found that the dermatitis lasted after the flies had been observed and exterminated.

The following experiments were tried to prove whether it be the fly or the parasite that was the etiologic factor in producing the dermatitis:

Six live flies were taken, upon which no parasites could be found; these were placed under a

watch glass and bound upon the right arm, leaving them in contact with the skin for three hours. Upon the left arm four dead flies, on which living parasites had been observed, were placed under a watch glass and left in contact with the skin for three hours, after which the glasses were removed and results awaited. The right arm showed nothing. Upon the left arm there appeared within twelve hours four small wheals, the character and evolution of which are later described.

To further the experiments some fresh lesions of patients were scraped and the scrapings examined microscopically and two of the mites were found in the scrapings.

CASES OF DR. H. A. RAY.

No. of Cases in Family.	Sex.		Temperature and Pulse.		Itching,	Straw in House and Beds.	Finding of Dead Flies in Straw.	Wheat-straw Worm in percentage of straws.	Nausea.	Lymphangitis.	Discoloration.	Complications.
	M.	F.	T.	P.								
5	2	3	99 100 100 101 100.4	78 86 90 90 92	Intense....	Yes.....	Yes.....	5%	Yes, in two cases.	In 1 case of child 2 years old.	Yes, bluish spots.	None.
2	1	1	Not taken.	Intense....	Yes.....	Yes.....	Yes.....	1%	No.....	No.....	Brownish spots.	None.
4	2	2	None in Child. 101 in Woman.	males. 99 100	Severe in child.	Yes.....	Yes.....	8%	Nausea; vomiting in woman and child.	In child..	Yellowish brown spots.	Eczema in child.
5	4	1	Not taken.	102 (Child.)	Intense....	Yes.....	Yes.....	2%	No.....	No.....	Yes, brownish.	None.
1	....	1	102 (Child.)	100	Very severe.	No. Straw stack at barn.	.....	.....	Nausea; vomiting and diarrhea.	No.....	Yes, bluish.	Severe acute weeping eczema involving right leg and thigh.
2	....	2	99 101	88 92	Intense....	Yes.....	Yes.....	4%	In 1 case.	Yes; in 1 case.	Brownish spots.	Acute eczema on breast of one case.
1	....	1	100	91	Severe....	Yes.....	No.....	.....	Yes.....	Yes.....	Yellowish brown.	None.
2	2	....	Normal.	.....	Severe, but few wheals.	Were straw balers.	.....	.....	.....	.....	Brownish spots.	None.
2	1	1	Male. 99 Female. 100	88 90	Severe....	Yes.....	Yes.....	10%	In female.	No.....	Brownish.	Pruritis in female; none in male.

At the suggestion of Dr. E. M. Van Buskirk some of the straws were sent to the Department of Entomology, Purdue University, to have the parasite identified.

Below is quoted an extract from the letter received from James Troop, head of the Department of Horticulture and Entomology: "The straws which you sent are infested with the wheat-straw worm (*Isosoma tritici*), which gets inside of the main stem. The parasite which is working upon the fly is the ditropenotus aureoviridis. This is a new species of parasite, it having been described last year for the first time."

SYMPTOMS.—Itching is the most prevalent and first symptom to attract the attention of the

patient. It is most persistent and intense during the after part of the night. At about the time the itching is most intense there appears an urticarial eruption, accompanied, in severe cases, with general systemic symptoms, such as rise of temperature from 99 to 102; in one case the temperature rose to 103.8; the pulse rate is accelerated to 100, or as high as 110—in one case to 130. Intense headache, anorexia, nausea, in some cases vomiting, and a mild form of diarrhea. In severe cases some complain of general joint pains and backache; in these cases the urine was examined and albumin in small amount was found, but no casts or blood. When

the acute symptoms disappeared so did the albumin.

Many patients who suffer from mild cases complain of nothing aside from the intense itching. If all straw is removed from the beds and house the symptoms will subside in one or two days and completely disappear in a few days more.

THE ERUPTION.—If the term urticaria be used the lesions may be divided into the following classes:

1. Urticaria papulosa.
2. Urticaria vesiculosus.
3. Urticaria pustulosa.
4. Diffuse urticarial erythema.

The third class of cases may be confused with varicella.

The lesion which is typical of the disease is the urticaria vesiculosa. The urticarial lesion varies in size from that of a split pea to a penny; it is surrounded by a pinkish halo, varying in intensity of color from a pale pink to a most bright pink. The "hive" like lesion is at first blanched, but later becomes a rose red color. It is elevated about 1 or 2 mm. above the skin surface, and is surmounted by a small vesicle containing a whitish fluid marking the place of inoculation. The vesicle is about 1 or 2 mm. in diameter and elevated about 3 mm. above the surface of the urticarial lesion. As the lesion grows old it goes through the process of evolution: (1) it is blanched and a central vesicle; (2) it is rose red and the vesicle may become a pustule; (3) it generally recedes to the skin level with scab formation, due to the scratching; (4) it leaves a brownish or greenish-yellow or purple spot on the skin surface. In debilitated patients the markings look not unlike faded indelible pencil marks. (This was noted in a patient suffering from pulmonary tuberculosis.) These discolorations may last for several weeks.

The anatomical location of the lesions is generally the back, sides and abdomen, and less frequently the arms and legs. The neck has very few lesions; the face, hands and feet have very few or none.

The number of lesions depends upon the number of parasites, ranging in number from very few to thousands; in some cases the back and abdomen have been almost a solid mass of lesions—new lesions on the tops of old lesions, so having lesions in all stages of development.

The pathology of the disease can probably be explained by a toxic substance being injected into the skin by the *Ditropenotus aureoviridis*.

DIAGNOSIS.—1. History of persons coming in personal contact with straw, either in mattresses, under carpet or handling it, or by individuals contaminated with the parasite; this straw must be infested with the *Ditropenotus aureoviridis*.

2. Hive-like wheals surmounted with a small whitish vesicle and surrounded with a pinkish halo, the lesions being more abundant upon the back, sides and abdomen.

3. The findings of the *Ditropenotus aureoviridis* in the scrapings of fresh lesions.

4. In severe cases, malaise, anorexia, general joint pains and backache, nausea, sometimes vomiting and enlargement of the superficial

lymph glands, all of which are in direct proportion to the number of lesions.

DIFFERENTIAL DIAGNOSIS.—Urticaria, the erythemas, scabies, varicella and in rare instances variola.

COMPLICATIONS.—The most frequent complication is a pruritis; the next is probably a dry eczema. Several cases of acute weeping eczema have been noted. Local abscesses may develop due to secondary infection inoculated by the patient scratching.

TREATMENT.—*I. Prophylaxis.*—1. By discarding the use of all straw containing the larvæ of the wheat straw worm.

2. By thoroughly disinfecting the straw mattresses and straw in use by subjecting it to steam or strong sulphur fumes in a tightly closed room for ten hours. Formaldehyd may be used for the same purpose.

3. If possible, by the eradication of the wheat straw worm by burning of the stubble and rotation of crops, but this can not always be done.

II. Medicinal Treatment.—1. Medicinal treatment is useless unless the cause be removed. All cases will recover in a few days if the cause is removed.

2. Where the wheals are fresh and itching is intense a great amount of comfort can be obtained by prescribing the alkaline bath, which helps to neutralize the toxic substance of the bite, which is probably highly acid. The alkaline bath is made by the following method:

To six gallons of water placed in a tub dissolve one of the following :

Bicarbonate of soda.....	8 or 10 ozs.
Carbonate of potassium.....	6 or 8 ozs.
Borax	3 or 4 ozs.

Stay in the bath about one-half hour at least.

Bland ungu. zinc oxid U. S. P. is useful on pruritis and eczematous lesions.

In my experience nothing relieves the skin of all of its pathologic condition after the parasite has inoculated the patient like the following prescription, though it is on the shotgun order:

R.	Gms.
Balsam peru	4|
Sodii bicarb.	8|
Sulphur precip.	8|
Ung. zinc oxididi, q.s. add.....	100|
Mft. ungu.	

Signa: Apply daily after alkaline bath.

SPECIAL ARTICLE**EFFERVESCENT PREPARATIONS.**

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AND

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The effervescent preparations of the pharmacopeia are divided into two classes, solutions and powders. Both classes depend for their effervescence upon the liberation of carbon dioxide from alkaline carbonate or bicarbonate by the use of a weak organic acid, such as citric or tartaric. All are slightly acid, due to the excess of acid in solution. All undergo chemical change in solution, in the alimentary tract, and after absorption. The physiological action of the different preparations depends upon the principal salt resulting from the chemical action which takes place in solution, together with the synergist action of other elements.

The following are the official effervescent preparations:

1. Magnesii sulphas effervescens.
2. Lithii citras effervescens.
3. Potassii citras effervescens.
4. Caffeina citrata effervescens.
5. Liquor potassii citratis.
6. Liquor magnesii citratis.
7. Pulvis effervescens compositus (Seidlitz powder).
8. Sodii phosphas effervescens.

The advantage of the effervescent preparations over the plain saline salts consists in their palatability, their tonic and sedative action, and their increased refrigerant and diuretic action.

Their disadvantage consists in the larger doses required and in the difficulty of getting active preparations.

It is most convenient to classify the effervescent preparations for pharmacological and therapeutic consideration according to the resulting chemical reaction in the solution or according to the acid radical resulting from such chemical reaction—viz., sulphates, citrates, tartrates and phosphates.

I. SULPHATES.**MAGNESII SULPHAS EFFERVESCENS.**

Magnesii Sulphas	In solution becomes	Magnesia Sulphas
Sodi Bicarbonas			Sodii Bitartras

Magnesium sulphate, which remains unchanged is the active ingredient and acts as a saline cathartic, producing free, watery stools.

According to Hare, magnesium sulphate produces a watery purge "by reason of its abstraction of water from the intestinal blood vessels, because it stimulates peristalsis by reason of the fluids present in the bowel and by the fact that solutions of it are not readily absorbed."

Because of the presence of large quantities of water in the bowel which it induces, magnesium sulphate is useful in constipation and fecal accumulation or impaction. In small, broken doses it arrests bowel fermentation, acts as a cooling refrigerant, soothes the inflamed mucous membrane, and is thus valuable in summer diarrhea, especially in children. Because of the abstraction of large quantities of water it is useful in dropsey, effusions, enteritis, peritonitis and other acute inflammations. Because of its slow absorption magnesium sulphate has but little effect in reducing the alkalinity of the blood, tissue fluids or urine, and is thus but slightly diuretic.

The sodium bitartrate present acts as a refrigerant, cholagogue, cathartic and slight diuretic. The sodium citrate aids by its refrigerant, cathartic and diuretic action. The carbon dioxide serves as a gastro-intestinal stimulant and sedative, a refrigerant and diuretic. The excess of acid holds the salts in solution and aids their cathartic action.

II. CITRATES.**LITII AND POTASSII CITRAS EFFERVESCENS AND CAFFEINA CITRATA EFFERVESCENS.**

Lithii or Potassii Citratas or Caffeina Citrata	In solution becomes	Corresponding Ci- trates
Sodii Bicarbonas Acidum Tartaricum Acidum Citricum			Corresponding Bi- tartrates

Potassii Bicarbonas Acidum Citricum Aqua	Becomes	Corresponding Bi- tartrates
Carbon Dioxide			Excess of Acid

LIQUOR POTASSII CITRATIS.

Magnesii Carbonas Potassii Bicarbonas Acidum Citricum Syrupus Acidi Citi- rati	Becomes	Potassii Citras Carbon Dioxide Excess of Acid
Carbon Dioxide			Excess of Acid

LIQUOR MAGNESII CITRATIS.

Magnesii Carbonas Potassii Bicarbonas Acidum Citricum Syrupus Acidi Citi- rati	Becomes	Magnesii Citras Potassii Citras Carbon Dioxide Excess of Acid
Carbon Dioxide			Excess of Acid

The citrates have a mild saline cathartic action, producing a stool similar to the saline sulphates and tartrates, but to a less degree.

The effervescent preparations, which are carbonated and slightly acidulated, stimulate the secretory action of the mucous membranes of the digestive and respiratory tracts, and of the urinary organs, favor liquefaction of the secretions, dissolve mucus and arrest fermentative processes

in the bowel. They decrease the acidity of the chyme and increase intestinal peristalsis by the increased amount of fluid which they induce in the bowel. In the body (after absorption) they are decomposed with the formation of carbonates which increase the alkalinity of the blood, tissue fluids and urine. Thus they produce free diuresis; increase the flow of the bile, diluting and changing its character; reduce the oxalates in the urine, and have a solvent action on uric acid.

They are thus of value in a mild gastric and intestinal catarrhal condition of a subacute or chronic nature, acute and subacute catarrhal conditions of the respiratory and urinary organs, cholecystitis, gout, rheumatism and so-called uric acid diathesis.

The bitartrates have a cooling aperient, cholagogic, refrigerant and diuretic action (synergistic to the citrates).

The carbon dioxide has a tonic, sedative, refrigerant and diuretic action (synergist to the citrates and bitartrates).

Caffeina citrata effervesces has a tonic, refrigerant and diuretic action, but no cathartic effect. It differs thus from the other saline citrates.

III. TARTRATES.

PULVIS EFFERVESCENS COMPOSITUS (SEIDLITZ POWDER).

Sodii Bicarbonas	In solution becomes	Potassii et Sodii Tartras
Potassii et Sodii Tartras		Sodii Bitartratas
Acidum Tartaricum		Carbon Dioxid Excess of Acid

The tartrates act as mild saline purgatives, not so active as the sulphates, but more active than the citrates or phosphates.

They render, after absorption, the blood, tissue fluids and urine alkaline, thus affecting the mucous secretions and urine similarly to the citrates, but to a less degree.

The presence of the carbon dioxide produces a tonic and sedative effect upon the gastro-intestinal mucous membrane and acts as a refrigerant and diuretic.

The bitartrate has a mild laxative and cholagogic effect, and acts as a refrigerant and diuretic.

The excess of acid holds the salts in solution, and the acid medium aids their cathartic action.

PHOSPHATES.

SODII PHOSPHAS EFFERVESCENS.

Sodii Phosphas Ex-siccatus	In solution becomes	Sodii Phosphas
Sodii Bicarbonatis		Sodii Bitartratas
Acidum Tartaricum		Sodii Citras Carbon Dioxid Excess Acid

Sodium phosphate acts as a mild saline purgative, not so active as the saline sulphates or tartrates, but more active than the citrates. It seems to have a more decided cholagogic action than the other saline salts. Its action on the blood, tissue fluids and urine is similar to the other salts, especially the citrates and tartrates. It has similar uses to the other saline salts, but is especially recommended in cholecystitis, catarrhal jaundice, cirrhosis of the liver and infantile diarrheas. The bitartrate, citrate and carbon dioxide act as synergists, while the excess of acid keeps the salts in solution and aids the purgative action.

Method of Preparation.—The method of preparation of the effervescent powders is rather difficult, and perhaps a large number of druggists would not be prepared to compound same. However, a good graduate pharmacist should have no difficulty with them, even with the ordinary apparatus found in the store. The preparations so made by the students in our laboratories are, we believe, of a better quality than those which have been carried in stock for a long time. They effervesce faster and are more readily soluble. One of the things absolutely necessary to obtain good results from this class of preparations is to see that perfectly fresh stock is obtained.

The liquid preparations are easily compounded and can be put up by any druggist. The process consists of making an acid solution of the salt desired, placing in a bottle and adding a few grains of an alkaline bicarbonate and stoppering tightly. These preparations have the advantage of obtaining the salt in a fresh condition, as they are nearly always made from the carbonate of the mineral by acting on it with the acid desired. They are, however, not permanent and should be made fresh when desired.

The most desirable class of effervescent preparations is those of which compound effervescent powder is an example. These preparations are easily made by any druggist, will keep for any length of time, and always furnish a fresh preparation of quick action. To illustrate: A large number of lithium citrate tablets found in our stores are old stock, having been kept for years perhaps in the jobbing houses and an equal length of time in the retail stores. As a result when they are mixed with water the action is slow and the effervescence is entirely lost. If instead this would be dispensed in two powders, using lithium carbonate in one and citric acid in the other and then mixed as in the case

of compound effervescent powders, a perfectly fresh preparation could always be at hand.

Care should be taken in prescribing a carbonate with an acid or a preparation containing an acid unless effervescence is desired.

Preparations containing carbonates when mixed with those containing acids produce effervescing, which makes them difficult to dispense, and in a great many cases destroys their therapeutic effects by precipitating out the active ingredients or by changing the chemical nature of the salts in solution.

Preparations which contain carbonates in solution:

- Syrupus Rhei.
- Syrupus Rhei Aromaticus.
- Syrupus Picis Liquidæ.*
- Syrupus Tolutanus.*
- Syrupus Zingiberis.*
- Mistura Rhei et Sodaæ.
- Mistura Ferri Composita.
- Mistura Cretæ.
- Spiritus Ammonii Aromaticus.
- Tinctura Guaiaci Ammoniata.

Preparations containing acids:

- Acetum Opii.
- Acetum Scillæ.
- Fluidextractum Conii.
- Fluidextractum Ergote.
- Fluidextractum Lobeliæ.
- Fluidextractum Nucis Vomicae.
- Fluidextractum Sanguinariae.
- Fluidextractum Scillæ.
- Syrups Lactucarii.
- Syrupus Ipecacuanhae.
- Syrupus Rosæ.
- Syrupus Scillæ.
- Tinctura Ferri Chloridi.
- Tinctura Sanguinariae.

* In these preparations the carbonate is used to aid in solubility and does not appear in the preparation.

THE JOURNAL has been recently informed by the superintendent of police of the city of Muncie that he holds a warrant for a man giving the name of Harold S. Shafer on a charge of obtaining money under false pretense. He has also said to have gone under the name of Earl S. Hall. He is selling life insurance and may pretend to represent most any company. When he goes into a town he calls on some of the leading physicians and tells them that he wants to appoint them as medical examiners for the company he represents at a salary of \$30 to \$50 per month, but they will have to buy some insurance

before he will appoint them medical examiners for the company.

The following description has been given: Forty-five to 50 years old, dark complexion, smooth face (may have short moustache now); has a scar about two inches long on left side of face, iron gray hair, 5 feet 11 inches tall, weight 160 pounds, prominent cheek bones, is a good talker, and is thoroughly versed in life insurance.

If this man is located the police department of Muncie wish to be notified at once by telegraph or telephone, when proper action will be taken for his arrest.

The mortality and morbidity statistics of the Panama Canal zone, as presented¹ to the American Medical Association by President William C. Gorgas, are such as to earn for him and his assistants the everlasting gratitude of not only the medical profession but of every loyal citizen of the United States.

From a practically uninhabitable swamp so infested with the anopheles and stegomyia mosquitoes as to make the death rate 65.41 per 1,000 of population in 1905, these men, by their intelligent perseverance, and indeed personal bravery, have brought the rate down to 24.83 per 1,000 of population, the present mortality being less than two-fifths that of only three years ago.

More interesting still is the death rate among the American residents and employers in Panama, which has been brought down to 9.72 per 1,000, a figure that compares very favorably with the mortality rate of the healthiest localities in our country. Furthermore, whereas there was formerly an appalling morbidity as well as mortality from malaria in this district, the mortality from this disease is now reduced to less than one-fourth of that of 1905, with a still greater decrease in morbidity. The results in the yellow fever crusade present an even more striking picture.

All this has been accomplished by means of drainage, brush cutting and protection from the bite of the mosquito by proper screening, and it is estimated that these prophylactic measures combined are not as expensive as the fuel used for keeping the same number of people warm in the temperate zones.

Indeed Colonel Gorgas is led to believe that in view of the advance made in tropical sanitation in the past fifteen years, and the greater returns for labor, the tropics, after a period, say, equal to that from the Norman conquest of England to the present time, will be as powerful and cultured centers for Caucasian occupation as any in existence. And the recent strides would certainly seem to indicate that he is none too sanguine.

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EDITORIALS

WHEN TO OPERATE IN PELVIC INFLAMMATION OF TUBAL ORIGIN.

Simpson, in the July number of *Surgery, Gynecology and Obstetrics*, begins his article on the above subject by the three following pertinent questions:

"1. Will operation always be necessary for complete restoration of health, comfort and functional activity?

"2. If operation is decided upon, will the co-incident occurrence of acute illness and operation entail more or less danger than their separate occurrence?

"3. If interval operation is decided upon, by what means may we determine that a safe time has been reached?"

In answer to the first question the author states that in his experience about 10 per cent. of all inflammatory cases are of the graver types of tubal infection resulting in pus tubes, tubo-ovarian abscesses, cystic degeneration of the ovaries and extensive adhesions. The gonococcus (in about 33 per cent., Proescher), tubercle bacillus (1 per cent., Proescher), or other pyogenic micro-organisms, are the usual causes, and permanent invalidism results in the absence of operation. The next group, somewhat larger than the first, witnesses less marked destructive changes, with sealed tubes and often only unilateral involvement. Group three is comprised of those cases in which the exudate has been absorbed, the tubal mucosa restored to normal, but with imprisonment of the tube and ovary by peritoneal adhesions, and resulting painful menstruation, even though sterility does not occur. The writer believes that the largest group is made up of those patients whose tubes are practically restored to normal, and here are found many puerperal infections from the colon bacillus, streptococcus, staphylococcus, bacillus aerogenes capsulatus, and often gonococcus. Here the process is analogous to surface infections, as in erysipelas, furuncle or carbuncle; the exudate is rapidly absorbed, with little trace of its former existence remaining.

In answer to the second question, as to whether operation in the presence of acute illness does entail greater risk than their separate occurrence, the author's experience is certainly in accord with that of operators of the widest observation—viz., that the separate occurrence of the two processes not only entails less risk to life but a much lower postoperative morbidity. For such facts several factors are responsible—increase in the reserve strength, less risk from cardiac and renal complications from the anesthetic (Offergeld, Muller, Wells, Stone and Ewing, Bevan and Favill), less chance of spreading the infection, greater immunity and consequent sterilization of the pus, fewer technical difficulties and a more appropriate time for the removal of the products of inflammation, particularly since the disease properly treated rarely causes death. Were the temperature considered a fair index of improvement under proper treatment such measure might be taken from the fact that in 77 per cent. of the author's cases the temperature reached normal within ten days and remained so. In 40 of the author's interval cases bacteriologic examination was positive in only 5 per cent. From an experience of 456 consecutive sections for the removal of products of pelvic inflammation, with 3 deaths, the author is led to believe that the mortality in interval operations should not exceed 1 per cent.

As to the arrival of the time when operation may be safely undertaken the author is guided by the following rules:

"1. The patient shall have recovered from her acute illness, and shall have regained a satisfactory margin of reserve strength.

"2. The temperature shall not have risen above normal a single time for a minimum period of three weeks.

"3. The inflammatory exudate surrounding the focus of infection shall have been completely absorbed.

"4. There shall have been no marked or persistent rise of temperature following a careful bimanual examination."

The temporary effect of a bimanual examination is likened to that of a subcutaneous infection of tuberculin and the fallacy pointed out of attempting an extensive operation in the presence of so low a degree of immunity.

While many of the points brought out by the authors are undoubtedly true and eminently practical, yet the fact remains that in pelvic inflammation, as in every other inflammatory process, each case is more or less of a law unto

itself, and the surgeon must be guided by his own good judgment in the individual case. A waiting period of three weeks might be applicable to one case and not to the next. One patient may be capable of much greater immunizing than another. The virulence of one infection may be decidedly less than that of another of the same family of bacteria. So that, after all, while certain general facts may obtain with regard to this class of cases, yet the individual clinical picture must be the determining factor in both the prognosis and treatment of the case.

THE CLOT CULTURE IN TYPHOID FEVER.

In the July, 1909, *Archives of Internal Medicine* Lyons, of New Orleans, describes his results, in a small series of cases, of making, in ox-bile, a culture from the clot of the blood ordinarily used for the Widal test, and compares the results thus obtained with those of the Widal agglutination test and the blood-culture method. Through the advances of laboratory science of the past few years the blood-culture method has come to be the early diagnostic measure par excellence in typhoid fever, but cultural methods are not always available to the country practitioner and he is forced to rely on the agglutination test derived from a transported specimen.

That the agglutination test is unreliable, and especially so in the early days of the disease, the author cites in proof 42 cases of suspected typhoid at the Charity Hospital, from which a specific organism was isolated, but in only 53.3 per cent. was a positive Widal reaction obtained on admission, though blood-cultures were positive in 85.7 per cent. of the cases. Three of these cases, however, proved to be of paratyphoid infection and hence could not be expected to agglutinate the typhoid bacillus. Nor does the paratyphoid serum agglutinate its own organism any earlier than the typhoid. So that the author is led to ask whether "it might not be of the greatest importance, where blood is sent into the laboratory for the Widal test and found negative, to make cultures from this material with a view of isolating the typhoid bacillus."

Fornet, Müller and Gräf, and Kurpuweit have all obtained positive cultures from the blood-clot of Widal tubes sent into their laboratories for the agglutination test.

In this test it is, of course, essential to have the blood sent in sealed pipettes, and not in the dry state. In the absence of the usual Widal pipette, which the physician may not have with him, the author ingeniously suggests that an

ordinary hypodermic tablet vial be heated and drawn out at each end to a capillary tube; such pipette filled with blood, the ends sealed and the capsule is ready for transportation any distance.

The author prefers the method of Fornet, in which "the clot from the Widal tube, after the serum has been removed for the agglutination test, is planted in 5 c.c. of sterilized ox-bile and the mixture incubated at 37 degrees C. A transfer to agar slants or blood serum may be made after twelve hours. The occurrence of contamination is, fortunately, rare, but, should they occur, a pure culture may be procured by plating or by taking a loopful of the water of condensation from the contaminated agar slant and inoculating a fresh bile tube. After incubating again a pure culture will usually be obtained."

Of twenty suspicious febrile cases admitted to Dock's wards a Widal, a clot-culture and a control blood-culture were made; two of these proved to be paratyphoid infections. Of these 20 cases, 10, or 50 per cent., gave a positive Widal reaction; 12, or 60 per cent., a positive clot-culture, and 18, or 90 per cent., a positive blood-culture. In only 5, or 25 per cent., of the cases were the Widal and clot-culture positive at the same time, but, combining these two tests, positive results were obtained in 85 per cent. of the cases, almost equalling the percentage of positive blood-cultures. Again, the clot-culture is most often positive early in the disease, and, the reverse being true of the Widal test, the probability of making a diagnosis at any stage is increased by a combination of the two methods.

The author concludes his article by the statements that practitioners should be encouraged to send blood in a fluid state for the Widal test; that the blood-clot test should be made even in the presence of a positive Widal because the recovery of the organism is final while the Widal is occasionally positive in other conditions (a case of epidemic cerebrospinal meningitis with positive Widal is cited); that the chances of an early diagnosis are almost doubled by a combination of the two methods; that by the clot-method paratyphoid infections may be early recognized, an important prognostic factor; and that the Fornet method is superior to the other methods of applying the clot-culture test.

There are several points in favor of this test that should appeal to the general practitioner. That it would be a relatively simple matter in getting the blood for the Widal test to collect it in a capillary tube instead of as a smear is perfectly obvious. Again, the Widal test has been found positive in tuberculous meningitis, epidemic cerebrospinal meningitis, etc., in

which cases, of course, the clot-culture would be negative for the typhoid bacillus. Then there are those cases of so-called atypical Widal reactions which are always unsatisfactory and necessarily inexact as compared with positive cultural findings. And, lastly, any reliable test that will establish the diagnosis of typhoid early, rather than one that does not appear before the beginning or middle of the second week, can not but be a welcome addition to our diagnostic facilities in this too-prevalent disease, in which prophylaxis must ever remain a potent conquering factor.

SUDDEN DEATH IN STATUS LYMPHATICUS.

Two more sudden deaths directly ascribable to the so-called "status lymphaticus" have recently been reported, the one through the London letter to *The Journal of the American Medical Association* of July 21, 1909, and the other through the lay press of recent date.

The one case was that of a young lady, aged 29, who suddenly expired while undergoing a dry shampoo with tetrachlorid of carbon. Post-mortem examination revealed the condition of status lymphaticus, and the jury returned a verdict of death by misadventure, no blame being attached to the hair-dresser, although one or two cases of vomiting and syncope had been observed in the 30,000 times the drug had been made use of for a shampoo.

The other case was that of a young lord, thirteen years of age, who suddenly died while under an anesthetic, and upon subsequent examination proved to be the subject of a status lymphaticus.

In a paper on "Sudden Death: A Study of Certain Cases Occurring During Physical Exercise or Psychic Shock,"¹ read before the American Surgical Association in June, 1909, Blake mentions eight cases that have, within the past year, come to medico-legal autopsy in Boston, and these were in the experience of only two medical examiners. Another patient was withheld from operation, through the skillful diagnosis of the physician, and another died after a simple circumcision. In order to guard against untimely death from this cause he emphasizes several points of which the clinician must be ever mindful. That the condition is not at all infrequent is proven by the Boston series already cited. Next, a thorough and personal history should precede operations of even a minor character. Preanesthetic fright, apprehension,

and intense emotion should be minimized to the greatest possible extent (such as Crile's method of stealing the thyroid). Complete histories and autopsy findings in every case of sudden death are of the greatest importance, and these can best be secured by the active cooperation of medical examiners and coroners' physicians. All cases of operative sudden death should be carefully reported, even in the absence of an autopsy, and these had best be presented, not to the laity at large, but to an investigating committee of some representative society such as the American Surgical Society.

Dr. Blake's suggestions are indeed well taken and timely from more standpoints than one, for while operative deaths from this cause are rather rare when compared to the enormous number of times that operation, minor and major, is annually undertaken throughout the civilized world, yet such fact can not be offered as a legitimate excuse for a single death that might possibly have been avoided or even delayed. The calamity remains little less by reason of its comparative rarity if it could have been averted by the exercise of a reasonable amount of caution. And one does not need to go very far into a study of this condition to be struck by the paucity of complete autopsy records, including blood findings, that have followed these unfortunate deaths. At least, if such findings have been made, they certainly have not been reported to the medical world to such an extent as to be of material aid to the working profession. An investigating committee from a representative medical body, such as Blake suggests, would assuredly serve to disseminate knowledge concerning this all-too-obscure condition, and in this way doubtless a maximum amount of good would accrue from an intelligent prophylaxis. Such a committee should receive the heartiest cooperation of the entire medical profession, and without doubt Dr. Blake, who has undertaken this study, would welcome communications from any one who has had the opportunity of carefully observing the condition in even a single case.

EDITORIAL NOTES

REMEMBER the place, TERRE HAUTE. Remember the date, October 1 and 8.

THIS is vacation time. Doctors need rest and recreation as much as any other class of people, and we hope that every doctor in Indiana has taken at least two weeks for a vacation spent

1. *Annals of Surgery*, July, 1909, pp. 42-51.

away from the calls of the telephone and where everything pertaining to medicine has been forgotten for the time being.

We have recently received a monthly bulletin of one of the county medical societies in Iowa, which we think is worthy of imitation by other county societies. The bulletin is a three-page folder, of pocket size, on ordinary book paper, and, in addition to giving the names of the officers, announcement of society meetings and list of papers to be presented at various meetings, it also contains various news items concerning marriages, deaths, removals, etc., and some editorial comments on the work of the organization and medical affairs in the county. The bulletin is really a miniature journal, printed at small expense, and worthy of imitation by any county society.

The next session of the Indiana State Medical Association will be held in Terre Haute on Thursday and Friday, October 7 and 8. The September number of *THE JOURNAL* will be known as the Terre Haute number, and it will contain the complete program for the association and much information concerning entertainments, hotel accommodations, railroad connections and other facts of interest to the members who expect to attend the session. The members of the Vigo County Medical Society are making strenuous efforts to make the Terre Haute session a memorable one, and, owing to the favorable time of the year, there ought to be the largest attendance in the history of the association.

The Provident Savings Life Assurance Society of New York has sent out announcements, under date of July 15, 1909, to the effect that on and after date a uniform fee of \$5 will be paid for each completed examination for new assurance, irrespective of the amount applied for. This company was one of the large companies that reduced the medical fee to \$3 on the mistaken idea that competent examiners could be obtained for less than the \$5 fee which had previously been paid. We are pleased to know that the company has recently found it wise to restore the \$5 fee, and we believe that the company can rely upon the hearty cooperation of the examiners in increasing the mortality savings through more thorough and better examinations, made possible by the securing of a better grade of medical

examiners through payment of reasonable fees for the services.

In this day and age, when physicians are using the automobile so extensively in professional work, it is well to take into consideration the fact that there is a general public sentiment against the automobile driver, no matter who he may be. The most careful driver may meet with accidents. The steering gear may lock, the car may skid, the brakes may fail to hold, or a horse frightens in an unusual manner and someone is injured, through no fault of the automobile driver. Yet the injured man sues for damages and the court grants the petition; an unfriendly jury renders an unfair verdict against the automobile driver. Time and expense would be saved if the driver of the automobile carried insurance which protected him from damages arising from automobile accidents. We are firm believers in all kinds of insurance, and we are also under the impression that every automobile driver has or will sooner or later meet with some kind of trouble, which may or may not be through his fault, and the trouble usually means a large expense which may be avoided by automobile insurance. This is not a plea for any particular insurance company, but a little gratuitous advice to physicians who are driving automobiles, with the possibility of meeting with some sort of accident, followed by suits for damages and the attending expense which most of us can ill afford.

We have recently received a letter from a county secretary saying that one of the members of the Indiana State Medical Association, who is also a member of the American Medical Association, permits his professional card, containing announcements concerning the practice of numerous specialties, to appear on the curtain of an opera house in connection with grocery, dry goods and other advertisements. We are asked for an expression of opinion as to the ethics of such a practice, and can only add that it is an exhibition of exceedingly poor taste. Custom, and even the sanction of the Committee on Medical Ethics of the American Medical Association, has permitted the printing of professional cards in daily papers, but such cards should contain only the bare announcement of the physician's name, office or residence address, telephone number, and announcement of any limitation of practice. Any reference to special qualifications, guarantees to cure, or unusual equipment for professional work is considered unethical. Many

physicians consider it in bad taste to permit even a professional card to appear in public in any way, but it can hardly be considered a breach of propriety to permit the public, through a small and inconspicuous card in a daily or weekly paper, to be given the advantage of an announcement of address, office hours and the limitation of practice. Each physician must be his own judge as to what he considers proper under these limitations, but no reputable physician will overstep the bounds of propriety.

THE State Board of Health, during its July meeting, passed rules to comply with the new health laws passed by the last legislature. The most important of the rules adopted has to do with the preparation of public school rooms for the reception of pupils each fall. In explanation the board states that simultaneously with the opening of the public schools diphtheria, measles, mumps, scarlet fever and many other diseases usually increase. The statement of the board is that "this is caused by unclean school rooms and furniture and by the congregation of the pupils. They mass together and contact spreads infection. Some pupils may have just recovered from a communicable disease, or they may be from families that have been smitten, and, being infected, they transmit disease to those who are susceptible. It is reasonable to assume that the suddenly imposed confinement in the school after a period of freedom frets the children for a few days, causing more or less nervousness, and so resistance is lowered."

School boards are forbidden to overcrowd schoolrooms, to order all sick children home as soon as discovered. In the construction of new buildings, school boards must provide dry sites and such drainage as shall be necessary to maintain them dry; stone foundations, with cement-floor basements for all two stories or more in height.

Lighting shall be from one side only, the light being required to fall over the left shoulders of pupils. Blackboards must be dead black in color. Desk tops and banisters are to be washed with soap and water and afterward treated with a disinfectant.

Water in open buckets and tin cups is condemned as dangerous, and a free-flowing faucet and small cup is recommended. A strong stream from the larger faucet hitting the small cup will overflow the cup and aid in the disinfection.

Slates are condemned because of the general practice of cleaning them with mouth juices.

The distribution and collection of pencils is to be avoided as much as possible because of the habit of chewing the ends.

CORRESPONDENCE

NOTICE TO AUTHORS OF PAPERS FOR THE TERRE HAUTE SESSION.

INDIANAPOLIS, IND., Aug. 1, 1909.

To the Editor:—By direction of the chairman of the committee on scientific work the attention of essayists and discussants is hereby drawn to the necessity of keeping within the time limits, which are as follows: Papers 20 minutes (preferably less, to allow of more discussion), first discussant 10 minutes, second 5 minutes. It is expected that papers in a symposium shall not be 20 minutes long. It is hoped that every member whose name appears on the program will be present. Essayists are requested to send in synopses of their papers at once.

F. C. HEATH, Secretary.

THE TERRE HAUTE MEETING.

TERRE HAUTE, IND., Aug. 3, 1909.

To the Editor:—Concerning the next session of the Indiana State Medical Association, to be held at Terre Haute, Thursday and Friday, October 7 and 8, the following announcement may be appropriate:

Wednesday evening, October 6, will be devoted to social entertainment for members of the association only. On that evening there will also be a meeting of the House of Delegates and a meeting of county society officers. On Thursday, October 7, the visiting ladies will be given a trolley ride to St. Mary's of the Woods, where luncheon will be served. On Thursday evening, October 7, President Kahlo will deliver his address, and there will also be an address by Dr. Collins, of New York, who is to be the guest of the association. After this there will be a theater party, given by the Vigo County Medical Association to the Indiana State Medical Association members and their families. On Friday, October 8, there will be a boat trip to Fort Harrison on the Wabash, with luncheon served on the steamer.

Further announcements concerning the Terre Haute session will be sent for publication in the September number of *THE JOURNAL*. Very truly,

WALKER SCHELL,
Chairman Committee on Arrangements.

DR. LEVIN J. WOOLLEN.

To the Editor:—The memory of Levin J. Woollen, M.D., whose death occurred at his home in Vevay, Switzerland County, April 20, is deserving of more than passing notice. Possessing professional attainments, which rendered him the peer, to say the least, of any colleague living in his county or section of the state, he passed more than fifty years of his life in professional work. Had he devoted his life work exclusively to the field of medicine, his native ability would certainly have given him a state-wide reputation.

The Doctor was a native of Maryland, his family, several members of which became well known throughout our state, removing to Madison during the third and fourth decade of the last century.

He commenced the study of medicine in the year 1849, his preceptor being Dr. William Davidson, of Madison. The degree of M.D. was conferred upon him in 1852 by the University of Louisville, than which no school of medicine in the west was, at that time, to be preferred.

His professional life was spent in the counties of Jefferson and Switzerland, principally in the cities of Madison and Vevay, in both of which Woollen was considered the equal of any of his colleagues.

The Doctor, at one time, contributed modestly to the pages of medical journals, whatever he wrote being worth the reading.

He was a member of his county, state and American Medical associations.

The subject of our sketch, unfortunately, as the writer believes, had a predilection for public and political life, which he gratified at the expense of professional advancement. He was the Democratic candidate for Congress from his district in 1876, his opponent being Leonidas Sexton, of Rushville; the latter was successful, although his plurality was meager and the ordinary Republican majority was much reduced. In 1878 he was elected to the State Senate, representing Switzerland and Ripley counties, again proving his great personal popularity.

During his state senatorship Dr. Woollen served as chairman of the Committee on Public Buildings, which had in charge the construction of the present State Capitol; a just pride was felt by him at the part he had taken in the legislation which had led to the erection of the magnificent building, without a suspicion of dishonesty or corruption.

President Cleveland, in 1886, appointed Dr. Woollen as chief of division of swamp lands in

the general land office at Washington. During his incumbency of this office, huge thefts of most valuable timber lands in Minnesota were discovered, the result of the disclosure being that the greater part of the booty was returned to the national treasury, the evidence of illegality in the transaction having been furnished by Dr. Woollen.

Resigning his official position in 1889, and after practicing his profession for a time in Washington, he returned to his Vevay home, where he continued in practice till the last few years, being finally compelled to desist from his life work by the infirmities of age. After returning to his home, he was twice elected to the auditorship of his county.

Dr. Woollen was married in 1858 to Miss Mary Van Pelt, of Scott County, who, together with three children, two sons and one daughter, survive him.

W. R. DAVIDSON, M.D.

Madison, Ind.

DEATHS

ANDREW P. DAUGHTERS M.D., died at his home in Moore's Hill, Ind., July 7, from cerebral hemorrhage, aged 79.

S. K. POLING, M.D., one of the oldest and best known physicians of Jay County, died at his home in Bryant July 12. He was 68 years of age.

MARCELLUS M. ADAMS, M.D., of Greenfield, died August 4 at his home after an illness of two weeks due to ptomaine poisoning, caused from eating potted ham. He was the oldest practicing physician in Hancock County and well known throughout the state.

J. B. CASEBEER, M.D., of Auburn, died July 9, 1909. At the time of his death he was a member of the DeKalb County, Indiana State, and American Medical Associations, and a United States pension examiner. He had also been county health officer for many years.

JOHN C. PANNEBORG, M.D., a graduate of the University of Louisville, Ky., 1894, a member of the American Medical Association, and first president of the Lake County Medical Society, organizer of the Hammond Hospital, died at his home in Hammond July 9, aged 54.

ISAAC CAREY, M.D., the oldest resident of Grant County, died at the home of his son in Marion August 4, following a stroke of paralysis, at the age of 98 years. Dr. Carey practiced medicine until 80 years of age, and has since lived a retired life. He was born in 1812.

JOSEPH HALLANAN, M.D., died Wednesday, June 16, at his home in Logansport, aged 59 years. He was one of the leading physicians of his home city and a man of unusual mental attainments. He was born in Dayton, Ohio, Sept. 11, 1850, and received his education in the high school of Dayton and Notre Dame Academy. He studied medicine in the Cincinnati College of Medicine and Surgery, graduating at the age of 18 years. Dr. Hallanan was a member of the County, State and American Medical Associations.

NEWS, NOTES AND COMMENTS

DR. E. H. BRUBAKER has removed from West Middleton to Flora, Ind.

DR. RAYMOND A. AKIN, formerly located at Bedford, has removed to Gary.

DR. HUBERT W. WILSON, Michigan City, announces his retirement from practice.

DR. WILLIAM H. WAGONER has been appointed a member of the Board of Health of Peru.

DR. F. W. FOXWORTHY, of Indianapolis, is convalescing from an attack of appendicitis.

DR. S. ROSCOE CHANCELOR, of Kokomo, has returned from an extended visit in California.

PERU has been offered a public hospital by Capt. A. M. Dukes provided the city will equip and maintain the institution.

DR. GRIFFITH, an eye, ear, nose and throat specialist, of Paducah, Ky., has located in Kokomo.

DR. J. H. ROSS has returned to Kokomo after spending several months on his plantation in Florida.

DR. H. K. BONN, formerly interne at the Methodist Hospital, Indianapolis, has opened an office at 3005 N. Illinois St.

DR. R. B. SHORT, of Bedford, has recently returned from Rochester, Minn., where he spent a week at the Mayo clinics.

DR. J. ELMER SAALMAN, of Indianapolis, and Miss Elsie C. Staup, of Freeport, Pa., were united in marriage June 14.

DR. CHARLES E. SCULLIN, of Peoria, Ill., and Miss Grace Barracks, of Franklin, Ind., were united in marriage June 22.

DR. HARRY C. SHARP has been made treasurer of the reorganized board of trustees of the Indiana Reformatory, Jeffersonville.

DR. J. L. PUCKETT has built an addition to his private hospital in Kokomo, adding several beds and remodeling the operating room.

DR. J. C. KELLY, of Mitchell, returned the early part of August from an extended sojourn at the European ophthalmological clinics.

DR. LAMAR KNEPPEL, who has been practicing for several years in Wakarusa, has returned to Kokomo and formed a partnership with Dr. W. H. McClurg.

DR. AND MRS. J. T. FREELAND and daughter, of Bedford, have returned home after a month's tour of the western states, including a trip to the Seattle fair.

DR. C. H. EMERY, of Bedford, together with his wife and children, is spending a few weeks visiting the western coast cities, including Seattle and Los Angeles.

THE contract for the erection of the proposed state tuberculosis sanatorium on the site near Rockville has been awarded to a Terre Haute company for \$19,841.72.

THE Lincoln Hospital Association, Indianapolis, has filed articles of incorporation without capital stock to establish and maintain a hospital for charitable purposes.

THE Frankfort Tuberculosis Sanatorium has been incorporated with a capital stock of \$10,000. Drs. Charles Chittick, Albert H. Coble and James W. Hadley are among the incorporators.

DR. J. WILLIAM MCKINNEY, of Bluffton, who suffered from appendicitis at Atlantic City, N. J., June 11 and was operated on in the German Hospital, Philadelphia, is reported to be convalescing.

DR. GEORGE E. SNEARLY, Roann, charged with having poisoned his wife, has been exonerated, as the autopsy disclosed no poison. It is stated that the prosecution was the result of malice or meddlesome gossip.

DR. J. K. TAKE, vice president of the Portland County Medical Society, was operated on for appendicitis in the Christian Hospital, Valparaiso, Monday, July 25. He is reported to be making an uneventful recovery.

THE State College Hospital, Indianapolis, connected with the Indiana University School of Medicine, may be closed, as it is said not to be needed for clinical purposes, and as it has not been paying expenses for some time.

DR. AND MRS. E. E. MITCHELL and two children, of Bedford, left July 22 for a trip through the west, stopping at Salt Lake City and Los Angeles. They will also visit Seattle and will probably go through Yellowstone National Park.

IN order to increase the building fund of St. Vincent's Hospital, Indianapolis, a summer festival was held during the first week of July at Fairbank, the site of the new hospital. Between thirty-five and forty thousand people attended during the week, and over \$12,000 profit was made.

THE State Tuberculosis Hospital, which is nearing completion at Rockville, Ind., finds itself

without sufficient funds to open and maintain its patients until the next legislature meets. This is a serious oversight, as many lives may be lost in the interim.

THE members of the Wabash County Medical Society have adopted a stringent set of rules, which sets forth that no member of the society shall allow his name to be mentioned in connection with an operation and that the names of members be withheld from public print when connected with any professional work.

DR. BROUGHTON, of Waterloo, has recently been treated in the hospital of Fort Wayne for blood poisoning, which was contracted while dressing the wounds of Frank Oberert, the Angola student who had his skull crushed by a Lake Shore train at Waterloo. The blood poisoning resulted from Dr. Broughton's having cut his thumb.

DR. A. C. KIMBERLIN, of Indianapolis, announces that after Aug. 1, 1909, he will discontinue general family practice, his work hereafter being limited to office practice, consultation and hospital work in internal medicine. Dr. Kimberlin sailed for Germany July 13, where he will spend the summer doing clinic work in internal medicine.

JASONVILLE is probably the only town in Indiana of 3,500 population where every practicing physician belongs to the county and state medical association. The Jasonville physicians are active and enthusiastic, and it was largely due to their efforts that the July meeting of the society was one of the best ever held in Greene County.

THE first annual commencement of the Training School of the Methodist Episcopal Hospital was held at Hall Place M. E. Church, Indianapolis, Wednesday evening, July 7. The first two graduates of this hospital were Misses Roxy Floss Parker and Josephine Edna Wilkinson. The address was made by Rev. L. A. Beeks, of Noblesville. The diplomas were presented by Dr. W. T. Graham, the new superintendent of the hospital.

THE annual session of the Indiana State Medical Association will be held in Terre Haute, Thursday and Friday, October 7 and 8. The

September number of THE JOURNAL will be known as THE TERRE HAUTE NUMBER, and will contain the completed program for the session and many items concerning entertainments, railroad fares, hotel accommodations, etc. It is expected that the session will be one of the best in the history of the Association.

As a token of the high esteem in which he is held by the members of the institution a beautiful silver loving cup was presented to Dr. Olen E. Holloway June 14. Dr. Holloway has been physician to the Indiana Soldiers and Sailors' Orphans' Home for the last 24 years. He was largely instrumental in bringing about the recent homecoming of former pupils and former employés, which was the most successful gathering in the history of the home. The cup bore the inscription, "From the present and ex-pupils and employés."

THE Indiana Militia Surgeons, who attended the school for instruction at Sparta, Wis., were tendered a reception at Rochester, Minn., on the evening of July 27 by Drs. Mayo and Graham, who gave the visitors an opportunity to meet in a social way the staff of St. Mary's Hospital and the assistants of the Drs. Mayo. On Wednesday, July 28, a special clinic was held at St. Mary's Hospital, at which twenty-seven major operations were performed. In the afternoon touring cars were placed at the disposal of the guests to visit various places of interest around Rochester.

THE medical profession of Cincinnati organized the society called Daniel Drake and His Followers Aug. 7, 1909. The object is to decorate the graves of the eminent medical men buried in and about Cincinnati, to preserve the archives of medicine in that vicinity, and, if possible, to erect a monument to Daniel Drake, the Father of Western Medicine, other than the book which has just appeared by Dr. Otto Juettner, of Cincinnati, on "Daniel Drake and His Followers." The following officers were elected: President, Dr. A. G. Kriedler; secretary, Dr. E. S. McKee; treasurer, Dr. A. G. Drury; historian, Dr. Otto Juettner; custodian, Dr. H. W. Felter.

In view of the fact that the function of the trained nurse is to serve the sick under the direction of the physician, and in view of the fact that the physician is qualified to know what the character of that service should be, the following action was taken by the Wayne County (Indiana) Medical Society:

Be it Resolved by the Wayne County Medical Society, in session June 2, 1909, that it is the sense of this society that training schools for nurses in connection with any hospital in this community should be under the supervision of a school board composed of not less than three reputable physicians and surgeons in active practice in this community; and

Be it Resolved, further, that the school board should select, direct the training of, and determine at their final examination and graduation the fitness of such nurses; and

Be it Further Resolved, That it shall be considered improper and unprofessional for any member of this society to lecture, teach, or instruct in any training school in this community which is not so governed.

SINCE the publication of our July number the Council on Pharmacy and Chemistry of the American Medical Association has acted on the following products:

Articles accepted for N. N. R.:
 Tannismuth (Heyden Chemical Works).
 Digalen (Hoffman - LaRoche Chemical Works).
 Benzosalin (Hoffman-LaRoche Chemical Works).
 Benzosalin Tablets (Hoffman - LaRoche Chemical Works).
 Thephorin (Hoffman - La-Roche Chemical Works).
 Thephorin Tablets (Hoffman - LaRocha Chemical Works).
 Veronal Sodium (Merck & Co.).
 Zinc Peroxide Soap (Roessler & Hasslacher Chem. Co.).

Articles accepted for N. N. R. Appendix:
 Dionin Ointment 5 per cent. (Manhattan Eye Salve Co.).
 Argyrol Ointment 10 per cent. (Manhattan Eye Salve Co.).
 Holocaine & Adrenalin Ointment (Manhattan Eye Salve Co.).

REPORT OF POSTMORTEM EXAMINATION OF JOHN PAUL JONES.—Section made 113 years after his death. (Quoted from "John Paul Jones Commemoration," Government Printing Office, 1907.)

"Then came one of the most interesting features of the verification—the autopsy, doubtless the only one in history ever made upon a body

that had been buried for a hundred and thirteen years. In order not to alter in any way the appearance of the corpse, Dr. Capitan and his assistants laid the body upon its face and made the opening in the back to explore the thorax and the viscera contained therein. A quantity of alcohol ran out, the internal organs being thoroughly saturated with it. This accounted for their excellent state of preservation. The left lung showed a spot which was clearly the result of an attack of pneumonia or broncho-pneumonia. It had healed, but remained surrounded by fibrous tissue. Mr. Buell, in his 'Paul Jones,' (Vol. 2, p. 235) says: 'During this inspection (of the Russian fleet), which consumed about fifteen days, the Admiral contracted a heavy cold, which, almost the very day of his return to St. Petersburg, developed into pneumonia. Both the eminent physicians who attended him pronounced his lungs permanently affected and told him he could never hope to endure again the rigors of a Russian winter. This was in June, 1789. In May, 1790, two years before the Admiral's death, he returned to Paris. The same author says of him (Vol. 2, p. 267), 'The doctorts declared that his left lung was more or less permanently affected.'

"Dr. Capitan and Professor Cornil found nothing particularly characteristic in the heart, which was still quite flexible. It was contracted, and the cardiae walls exhibited muscular fibers striated lengthwise and crosswise. An abundance of small crystals and bacteria was noticed. The liver was of a yellowish-brown color, somewhat contracted, and its tissues were rather dense and compact. There were found in the hepatic cells numerous varieties of crystals and microbes. The masses of tyrosin, appearing to the naked eye like white opaque granules, were less numerous than in the lungs. The cells of this organ were not so well preserved, and, according to Dr. Capitan, a positive opinion could not be given as to symptoms caused by its condition. The gall bladder was healthy and contained a pale yellowish-brown bile of a pasty consistency. The stomach was contracted and very small. The spleen appeared comparatively larger than it ought to have been considering the marked contraction of all the viscera. Its tissues appeared rather firm; it showed no anatomic lesions. The kidneys were well preserved in form and presented very clearly under the microscope the evidences of interstitial nephritis, commonly called 'Bright's disease.' Dr. Capitan, in speaking of these organs, in his report says: .

"The vessels at several points had their walls thickened and invaded by sclerosis. A number of glomeruli were completely transformed into fibrous tissue and appeared in the form of small spheres, strongly colored by the microscopic reactions. This verification was of the highest importance. It gave the key to the various pathological symptoms presented by Paul Jones at the close of his life—emaciation, consumptive condition, and especially so much swelling, which from the feet gained completely the nether limbs, then the abdomen, where it even produced ascites (*exsudat intra abdominal*). All these affections are often observed at the close of chronic interstitial nephritis. It can, therefore, be said that we possess microscopic proof that Paul Jones died of a chronic renal affection, of which he had shown symptoms toward the close of his life. In a word, like my colleague, Papillault, and by different means, relying solely upon the appearance of the subject, on the comparison of his head with the Houdon bust, and besides considering that the observations made upon his viscera agree absolutely with his clinical history, I reach this very clear and well-grounded conclusion—namely, that the corpse of which we have made a study is that of Paul Jones.

"I will even add, always with Papillault, that, being given this convergence of exceedingly numerous, very diversified, and always agreeing facts, it would be necessary to have a concurrence of circumstances absolutely exceptional and improbable in order that the corpse here concerned be not that of Paul Jones.

"Professor Cornil concludes the report of his microscopic examinations as follows: 'We believe that the case in point is interstitial nephritis with fibrous degeneracy of the glomeruli of Malpighi, which quite agrees with the symptoms observed during life.'

THE Indiana State Board of Health announces that the first examination of those wishing to become eligible for appointment to the position of county health commissioner or city or town health officer will be held in the State House at Indianapolis Sept. 30, 1909. Licensed physicians intending to enter the examination must make application upon official blanks by September 23. Application blanks and rules governing the examination may be secured from the state board. The board announces the examination will cover generally the fields of hygiene

and sanitary science, including food and drug inspection. A reasonable familiarity with the health statutes and the rules of the board will be required, and the subject of vital statistics, the foundation of public health work, will be gone into thoroughly.

All applicants for admission to examination will be supplied with a pamphlet containing the health statutes and rules upon receipt of 4 cents in postage stamps. The edition of the pamphlet containing the statutes and rules is limited and can not be generally distributed.

Application blanks and pamphlets of statutes and rules will be ready for distribution from and after August 10.

**RULES OF THE INDIANA STATE BOARD OF HEALTH
GOVERNING THE EXAMINATION OF APPLICANTS
FOR CERTIFICATES OF ELIGIBILITY TO AP-
POINTMENT TO THE OFFICE OF COUNTY
HEALTH COMMISSIONER, CITY HEALTH OF-
FICER AND TOWN HEALTH OFFICER.**

(Passed July 9, 1909, by the Indiana State Board of Health according to Chapter 144 of the Acts of 1909.)

Rule 1.—On and after Jan. 4, 1910, only those persons who have passed a regular examination by the State Board of Health in hygiene and sanitary science and hold a certificate of eligibility, or who have had recent experience in the duties and work of the office, shall be eligible to appointment as county health commissioners, city health officers, or town health officers.

Rule 2.—Applicants for examination shall be licensed physicians, able bodied, temperate, not addicted to the use of drugs and of good moral character. Provided, if in towns no licensed physician can be found to accept the position, then the appointment shall be made from an eligible list, supplied by the State Board of Health, of persons not physicians who have passed an examination before said board.

Rule 3.—Applications to admission to examinations shall be made in writing upon blanks furnished by the State Board of Health at least one week previous to the announced date of the examination at which the applicant desires to appear.

Rule 4.—Examinations will be both oral and written and will be held at times and places announced from time to time by the state board; and said examinations shall well cover the field of hygiene and sanitary science, with special reference to the state health statutes and health rules of the State Board of Health.

Rule 5.—Serious defects in vision or hearing, serious lameness or continued ill health shall dis-

qualify an applicant. Applicants who fail to pass an examination may apply, after a lapse of six months, to be examined again.

Rule 6.—All applicants who possess the required qualifications and who pass the prescribed examinations will be given an official certificate of eligibility which will be evidence of their legal eligibility to appointment as county health commissioner in any county of the state or as city or town health officer in any city or town in the state.

BOOKS RECOMMENDED.

Practical Hygiene, by Charles Harrington, published by Lea Bros. & Co., \$4.25; *Hygiene and Sanitation*, by Seneca Egbert, published by Lea Bros. & Co., \$2.25; *Sanitary Water Supply and Sewage Disposal of Country Houses*, by William Paul Gerhard, published by D. Van Nostrand & Co., \$2; *Hygiene of the Nursery*, by Louis Starr, published by P. Blakiston's Sons & Co., \$1.50; *Medical Inspection of Schools*, by Gurliek and Ayers, published by New York Charities Publication Committee, \$2; *Book of Instructions to Health Officers* (Red Book), published by the State Board of Health, will be sent free to all applicants for examination upon receipt of 4 cents postage.

BURBANKING THE HUMAN RACE.—The development of a stronger and better race of men by the application to them of the same principles employed by Luther Burbank in the creation of perfect types of fruits, vegetables and flowers was discussed by Dr. David Starr Jordan, president of Leland Stanford University, before the alumni association of the Indiana University School of Medicine at the recent meeting. The subject of Dr. Jordan's address was "Burbanking the Human Race." While emphasizing the need of assisting and stimulating the development of human kind by a scientific study of the problem, Dr. Jordan recognized that "Burbanking the human race" through advanced laws or other artificial means was an "enticing picture" which could hardly be realized with the same degree of success that the development of vegetation is accomplished through the Burbank methods. However, he showed that in a natural way, the "sifting of society" is going on all the time on account of the constant and active influences of heredity, the variations of types of individuals, the selection of some as the fittest, and other agencies which are always changing types and races of men. It was Dr. Jordan's conclusion that, after all, in

applying scientific methods for the betterment of mankind, he would not sacrifice the initiative or self-direction of individuals and the influence of love. At the outset of his address Dr. Jordan illustrated the power which scientific breeding has in the physical development of sheep. The first sheep were wild sheep, he said, and the varying breeds as we know them today were developed by men through their selection of certain individuals for breeding with the purpose of obtaining certain types. Heredity carries down certain characteristics through generations, he explained, but there are always variations in the individuals. If those variations are selected from the mass and segregated for the purpose of developing a certain distinct type of the species, hereditary characteristics can be changed. Illustrating this, he took up some of Burbank's experiments with flowers. Burbank found the golden poppy in California, and he wanted to make a crimson poppy. By selecting the variations of the golden poppies which were the nearest crimson in shade, and by infinite patience growing the nearest crimson variations, all the time destroying the poppies which tended to reproduce their hereditary golden color, he finally segregated a new variety of poppy, the crimson. Likewise Burbank wished to produce a perfect walnut. By applying the same methods he did develop a walnut which he thought was perfect, but he found that the bluejays could peck through the shell. Then Burbank had to begin breeding his perfect walnut with the walnut with thicker shells. If such methods of selection, segregation, the destruction of the undesirables and the survival of the fittest could be applied to the human race, Burbank thinks, according to Dr. Jordan, that almost any desired type of the human being could be developed at will. Given the power to apply the principles and the time, probably a thousand years, Burbank believes that Darwins could be made by the thousands. It would be possible to make everybody red-headed and to thin or thicken the skulls of races at will if the scientists had the same freedom to work on the human race that they have in experimenting with guinea-pigs and sheep, is the Burbank idea. However, Dr. Jordan said he realized the impossibility of segregating and developing the desirable types of human beings and destroying or isolating the others. He even doubted the full effectiveness of laws which might be passed for the purpose of carrying out the ideas, which he thought would keep on being

enforced to a large extent through the natural "sifting of society." Society is sifted through such elements as war, intemperance and other agencies of this nature, he said. A great war draws to it the men who have the initiative and enthusiasm to go to battle, and leaves behind the weaker element and the less optimistic people. Those with the initiative are killed in battle, and the weaker ones at home are left to propagate the race. Such sins as intemperance, he said, had the tendency to destroy the weak and leave the stronger to live. The third or fourth generation of intemperate people probably died out altogether, he thought. Intemperance would nullify itself finally and leave only those who were strong enough to resist, he thought possible, if it were not for the fact that some of the strong and the good, without the weak tendencies, were contaminated with it. The pauper type of people is preserved by charity, he said. If left alone, the shiftless and the incompetents who are unable and unwilling to earn a living would die out, if it were not for the assistance of charities which nourish the unfit and allow them to propagate through generations.

SOCIETY PROCEEDINGS

ALLEN COUNTY.

FORT WAYNE MEDICAL SOCIETY.

(Meeting of June 15, 1909.)

Society met in regular session in the Assembly room, with 16 members present. Minutes of meeting of June 1, read and approved.

Clinical case reports. Dr. H. K. Mouser reported case and showed specimen of intestine perforated by sixteen penny nail. Patient, low grade imbecile, aged 28 years, suffering as with belly ache, was given large dose of salts. Had high temperature when admitted to hospital, and belly was much distended. Tentative diagnosis of paralytic ileus was made. June 12 belly was opened by Dr. George, as patient showed indications of general peritonitis. On manipulation nail was found. There was a perforation of the cecum about 5 inches from the appendix in the outer wall. Patient died from diffuse general peritonitis. Such cases very rare.

Discussion by Drs. Weaver and Wilking.

Uterine Sepsis was the title of a paper by Dr. Mary A. Wherry, in which she said that hemorrhage is sometimes a useful accident, the blood acting as a natural antiseptic. Separation of the membranes after child birth makes the uterus more susceptible to infection. The curette is a dangerous instrument; douches are less dangerous, but should be carefully administered. Soluble silver salts are best for local

application. Hysterectomy to be advised and practiced in gonorrhreal infection of the uterus and tubes. Discussion by Dr. Weaver.

Ectopic Gestation was the title of a paper by Dr. Alice B. Williams, in which she said that the etiologic factor is the inflammatory condition interfering with passage of ovum to uterus. Physical and developmental conditions also cause arrest. The author gave a discussion on ovarian pregnancy.

Discussion by Drs. Buchman and Williams.

Summer Complaint in Babies was the title of a paper by Dr. J. W. Squires. He said that proper feeding, nursing and care of babies will break the backbone of the dread disease summer complaint. He spoke of the mental effect on milk. Regarding treatment, he said empty the stomach and bowels thoroughly and speedily and exercise good sense in the care and feeding of the infant.

Discussion by Drs. Gilpin, Van Buskirk, Buchman and Wilking. Closed by Dr. Squires.

Motion made and carried that transfer card be issued to Dr. Guy A. Smith.

Adjourned.

J. C. WALLACE, Sec.

CLINTON COUNTY.

The Clinton County Medical Society met in Dr. I. C. Lambert's office, at Colfax, Ind., Thursday evening, August 5.

Bacilli and Septicemia was the title of a scientific paper by Dr. T. R. Brown, who has spent two years as government bacteriologist at Panama.

Cancer of the Colon. Dr. Goethe Link, of Indianapolis, gave a talk on this subject, exhibiting a specimen from an operation, consisting of about eight inches of the colon and more than a pound of the omentum.

After the regular order of business the society adjourned to a banquet, where Dr. W. F. Fernald acted as toastmaster.

A vote of thanks was tendered the Colfax members of the society for their generous hospitality.

The new officers are as follows: President, A. H. Coble; secretary-treasurer, J. M. Hadley; censors, Drs. W. J. Fernald, J. E. Robinson and W. H. Curtis.

Adjourned.

J. M. HADLEY, See.

GREENE COUNTY.

The Greene County Medical Society met in Jacksonville, July 15. Minutes of previous meeting read and approved.

Ileo-Colitis was the subject of the session, and was discussed by all members present. The July meeting was one of the best in the history of Greene County.

The next meeting will be held in Lyons, Indiana, August 12.

Adjourned.

E. R. MASON, Sec.

KOSCIUSKO COUNTY.

The regular meeting of the Kosciusko County Medical Society was held July 27. Minutes of previous meeting were read and approved.

Etiology and Treatment of Acute and Chronic Constipation was the title of a paper by Dr. P. G. Fermier, of Leesburg.

Etiology and Treatment of Acute and Chronic Diarrhea was the title of the paper which was presented by Dr. T. J. Shaekelford.

The papers were discussed by Drs. F. H. Foster, C. N. Howard, F. J. Young and C. C. DuBois.

Dr. F. H. Foster, chairman of the program committee, distributed the next half year's programs.

Adjourned.

C. NORMAN HOWARD, Sec.

JEFFERSON COUNTY.

The Jefferson County Medical Society met Wednesday, July 28, at 1 p. m., with the president, Dr. Shepherd, in the chair. Dr. W. H. Stemm, councilor of the Fourth District, was present and addressed the society on the work of the postgraduate course. The society has decided to take up the work and will hold weekly meetings beginning September 1.

Adjourned.

CARL HENNING, Sec.

PORTER COUNTY

The Porter County Medical Society met in regular session July 6 in Valparaiso with Dr. Take, vice-president, in the chair. In the absence of the secretary, the minutes were not read, and Dr. Lewis was appointed secretary pro tem. The report of the censors on the name of Dr. Ryan, of Valparaiso, being favorable, he was elected to membership. Dr. G. B. Hotchkins, residing in Valparaiso, aged 78, retired, was elected to honorary membership in the society. Dr. Hotchkins graduated from the University of Pennsylvania, Medical Department, in 1858.

The Relation of Tonsillar Diseases to Other Diseases was the title of a paper by Dr. Mitchell, of Valparaiso. General discussion followed.

Adjourned.

G. R. DOUGLAS, Sec.

Preliminary Program Indiana State Medical Association Annual Meeting, Terre Haute Ind., Oct. 7 and 8, 1909.

FIRST MORNING, GENERAL SESSION, 9:30-12:30.

1. Symposium on Cardio-Vascular Diseases.

1. Anatomical Considerations with Demonstrations. B. D. Myers, Bloomington.
 2. Demonstration of Action of Heart Valves. W. J. Mönkhau, Bloomington.
 3. Clinical Cases Showing Types of Myocardial Lesions. A. C. Kimberlin, Indianapolis.
 4. Exhibition of Specimens Showing Various Heart Lesions. R. H. Ritter, Indianapolis.
- Leaders in discussion, C. S. Bond, Richmond, and L. P. Drayer, Ft. Wayne.

2. The Psychic Element in Disease.

- F. B. Wynn, Indianapolis.
 3. Points in the Analysis of Psychotherapy. F. E. Hutchins, Indianapolis.
- Leaders in discussion, E. H. Lindley, Bloomington, J. B. Berteling, South Bend, and F. R. Charlton, Indianapolis.

FIRST AFTERNOON. 2:30 TO 5:30.

MEDICAL SECTION.

1. Malaria—Aestivo Autumnal Fever. G. D. Marshall, Kokomo.
- Leaders in discussion, N. D. Brayton and S. E. Earp, Indianapolis, and W. H. Stemm, North Vernon.
2. Value of Leucocyte Count, Analysis of 300 Blood Counts. B. W. Rhamy, Ft. Wayne.
- Leaders in discussion, H. R. Alburger, Bloomington, H. H. Thompson, Noblesville, B. P. Weaver, Ft. Wayne.
3. Nature of Insanity. Geo. Rowland, Covington.
4. Legal Responsibility of the Insane. A. E. Sterne, Indianapolis.
- Leaders in discussion, E. C. Reyer and C. E. Cottingham, Indianapolis, S. E. Smith, Richmond, and W. Terflinger, Logansport.
5. Home Treatment of Tuberculosis. J. C. Blossom, Mt. Summit.
- Leaders in discussion, J. N. Hurty, Indianapolis, F. A. Tucker, Noblesville, and Charles Wyeth, Terre Haute.

SURGICAL SECTION.

1. Foundations of Specialism. Stanley Coulter, Lafayette.
- Leaders in discussion, J. F. Barnhill, Indianapolis, G. F. Keiper, Lafayette, and A. E. Bulson, Ft. Wayne.
2. Results of Neglected Appendicitis. B. Van Sweringen, Ft. Wayne.
- Leaders in discussion, G. J. Cook and David Ross, Indianapolis, and C. A. Daugherty, South Bend.
3. Report of Ten Cases of Intracranial Syphilis with Comments. Charles F. Neu, Indianapolis.
4. Syphilis of Nervous System. Garrette Van Sweringen, Ft. Wayne.
- Leaders in discussion, R. Hessler, Logansport, W. N. Wishard, Indianapolis, and J. W. Hill, South Bend.
5. Ileo-Hypogastric Hyperesthesia. M. A. Austin. Anderson.
- Leaders in discussion, A. M. Hayden, Evansville, and T. B. Eastman, Indianapolis.
6. Classification and Pathology of Chronic Non-Tubercular Arthritis. J. V. Reed, Indianapolis.
- Leaders in discussion, J. H. Ford, and G. D. Miller, Logansport, and H. C. Sharp, Indianapolis.

SECOND DAY, OCTOBER 8, FROM 9:30 TO 12:30.

MEDICAL SECTION.

1. Hemoptysis. E. A. Crull, Ft. Wayne.
2. Treatment of Pulmonary Hemorrhage. Theodore Potter Indianapolis.
- Leaders in discussion, G. T. McCoy, Columbus, F. A. Dorsey, Indianapolis, and T. C. Stunkard, Terre Haute.
3. The Serum Treatment of Epidemic Cerebrospinal Meningitis. W. D. Hoskins, Indianapolis.
- Leaders in discussion, J. B. Fattic, Anderson, J. A. McDonald and Charles R. Sowder, Indianapolis.
4. Congenital Heart Disease, Case Report, Post Mortem and Specimen. L. T. Rawles, Ft. Wayne.
- Leaders in discussion, Allen Pierson, Spencer, and W. T. S. Dodds, Indianapolis.

5. An Overlooked Factor in Immunity.

W. J. Fernald, Frankfort.

Leaders in discussion, T. C. Kennedy, Shelbyville, A. P. Buchman, Ft. Wayne, O. J. Gronendyke, New Castle, and W. W. Tucker, Greencastle.

SURGICAL SECTION.

1. Tumors of the Tongue. L. D. Brose, Evansville.
- Leaders in discussion, G. R. Green, Muncie, and J. R. Eastman, Indianapolis.
2. Present Status of Indications for Use of Forceps. H. A. Duemling, Ft. Wayne.
- Leaders in discussion, A. S. Jaeger and E. E. Padgett, Indianapolis, E. J. McOscar, Ft. Wayne, and A. A. Washburn, Clinton.
3. Cæsarian Section as a Means of Rapid Delivery in Eclampsia with Case. Walker Schell, Terre Haute.
- Leaders in discussion, O. G. Pfaff and H. O. Pantzer, Indianapolis, and W. A. Fankboner, Marion.
4. Two Unusual Injuries in Region of Shoulder Joint. P. F. Martin, Indianapolis.
- Leaders in discussion, H. R. Allen and J. W. Sluss, Indianapolis, and J. H. Rubsam, Logansport.
5. Hemorrhoids, Etiology and Pathology. C. C. Kimmel, Ft. Wayne.
- Leaders in discussion, W. H. Gilbert, Evansville, A. B. Graham, Indianapolis, and J. H. Weinstein, Terre Haute.

SECOND AFTERNOON, GENERAL SESSION, 2 TO 5.

1. Surgical Dilatation of Stomach, Pathology, Etiology and Diagnosis. Edwin Walker, Evansville.
- Treatment. E. D. Clark, Indianapolis.
- Leaders in discussion, M. F. Porter, Ft. Wayne, and J. H. Oliver, Indianapolis.
2. Pancreatitis. Pathology, Etiology and Diagnosis. G. W. McCaskey, Ft. Wayne.
- Treatment. J. C. Sexton, Rushville.
- Leaders in discussion, T. B. Noble and T. V. Keene, Indianapolis, and P. J. Bareus, Crawfordsville.

BOOK REVIEWS

A TEXT-BOOK OF OPERATIVE SURGERY. Covering the surgical anatomy and operative technic involved in the operations of general surgery. Written for students and practitioners. By Warren Stone Bickham, Phar.M., M.D., Visiting Surgeon to Charity and Touro Hospitals, New Orleans. Third revised edition. Octavo of 1206 pages, with 854 illustrations, entirely original. W. B. Saunders Company, Philadelphia and London, 1908. Cloth, \$6.50 net; half morocco, \$8.00 net.

The new third edition of this work contains a great deal of new material both in text and illustrations. Whereas the last edition contained 984 pages, with 559 illustrations, the present one contains 1204 pages and 854 illustrations, 331 of which are entirely new. Some of the older text has been dropped, to be replaced and supplemented with newer and completer descriptions.

As a whole the book is eminently practical and contains in condensed form, besides the descriptions of

operative technic of the best recognized methods in general surgery, an epitome of the descriptive and surgical anatomy of the parts involved. In a work of such scope, the clinical aspects of the various subjects must needs receive but scant treatment.

The work begins with a consideration of the surgery of arteries and veins, and it is rather surprising that in so recent an edition no mention is made of the excellent work of Carrell, Guthrie and Crile in blood vessel surgery.

The fullest chapters are those on amputations and disarticulations, and the operations on the abdominopelvic organs, although only the so-called major operations of the gynecologist and the genitourinary specialist are described.

For a general work on the subjects treated this volume should prove a valuable one to both student and practitioner for ready reference.

DISEASES OF THE GENITO-URINARY ORGANS AND THE KIDNEY. Second Revised Edition. By Robert H. Greene, M.D., Professor of Genito-Urinary Surgery at the Fordham University, New York; and Harlow Brooks, M.D., Assistant Professor of Clinical Medicine, University and Bellevue Hospital Medical School. Octavo of 605 pages, profusely illustrated. W. B. Saunders & Co., Philadelphia and London, 1908. Cloth, \$5.00 net; Half Morocco, \$6.50 net.

The popularity of this work is attested by the fact that within a year of its first appearance, a new edition was undertaken. In the second edition several portions of the original text have been elaborated and considerable new material added, newer operative procedures and the gist of more recent literature, being included.

The work is essentially, as designed by the authors, one for the general practitioner, being the combined product of a surgeon and a physician working together. Being as it is, a single volume work, and that of rather limited extent, the literature of the subjects treated is not very extensively summarized. In fact, several more recent and interesting points in this particular specialty are either very cursorily dealt with or else not mentioned at all; e. g., the darkfield illumination method for the differentiation of the spirocheta pallida is dismissed in a small paragraph; Young's brilliant work in perineal prostatectomy is not touched upon, and the occasional satisfactory results from vaccine therapy in uro-genital tuberculosis, especially in the presence of a double infection, are not even mentioned.

The usual variety of remedies and methods of treatment for the gonorrhreal urethritis finds a place here and again bears witness to the fact that as yet no particularly satisfactory method of combating this infection has been found.

PROGRESSIVE MEDICINE. Quarterly. June, 1909. Edited by H. A. Hare, M.D., assisted by H. R. M. Landis. Paper, pp. 317. Price, Six Dollars per Annum. Lea & Febiger. Philadelphia and New York.

In this number are embraced the subjects of hernia; surgery of the abdomen, exclusive of hernia; gynecology; diseases of the blood; diathetic and metabolic diseases; diseases of the spleen; thyroid gland and lymphatic system; ophthalmology.

As usual, the later literature on the subjects treated is thoroughly digested and reviewed, the completer sections in this number being that of Foote on the surgery of the abdomen, and of Clarke on gynecology.

THE JOURNAL *OF THE* **INDIANA STATE MEDICAL ASSOCIATION**

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY under Direction of the Council

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NUMBER 9

ORIGINAL ARTICLES

THE PHYSICIAN AS A FACTOR FOR GOOD OR EVIL.*

AUGUST F. KNOEFEL, M.D.
LINTON, IND.

Praise and satire have been showered, one can say, almost indiscriminately upon the medical profession since the time when certain individuals took upon themselves the task of healing the sick and mending the wounded. Medicine, including surgery, history tells us, ranks older than any other art, Tubal-Cain, ranking as one of the first surgeons, having invented cauterizing instruments, machines for reducing fractures and various other appliances.

Ecclesiasticus said of physicians three hundred years before Christ, "Honor a physician with the honor due unto him, for the Lord hath created him." In contradiction to this, Plutarch writes: "And when the physician said, 'Sir, you are an old man,'" "that happens," replied Pausanius, "because you never were my doctor." In 1780 George Coleman wrote: "But when ill indeed, e'en dismissing the doctor don't always succeed." But it was Byron who said, "Physicians mend or end us; but, though in health we sneer, when sick we call them to attend us, without the least propensity to jeer." The relation existing between the physician and his two combatants, disease and death, is such as to be the subject for satire. First comes disease; then, the physician; then, death. The prevention of such a vulnerable spot, an Achilles heel in medicine, should be our aim; this is to be accomplished by raising the standard of medicine to such a scientific height that no longer will the individual doctor be the subject of ridicule.

As an illustration of what men of ability think of doctors at this day and date I would like to quote from an address delivered by Rudyard Kipling. Mr. Kipling said that the world was divided into two classes, doctors and patients. The patients look upon the doctor as non-combatants look upon troops fighting in their behalf. Death is bound to win the battle in the long run, but the non-combatants feel that the doctor will make the best terms possible on behalf of the non-combatants.

This fight for life is one of the most important things in the world; so those who control this fight must be among the most important people in the world. In times of flood, fire, famine, plague, battle, murder, etc., physicians must report for duty at once and stay on duty until their strength fails. But if physicians' work is exacting, so are their privileges great. They can pass through most riotous crowds unmolested; by flying a yellow flag they can turn a center of population into a desert; by flying a red-cross flag they can turn a desert into a center of population; if necessary, the largest liner can be stopped in mid-ocean until operation is completed. On their order houses are pulled down or burned, and they can call on troops to enforce their order. They are perhaps the only class who dare tell the world facts. The profession of medicine exacts from its practitioners the largest responsibility and the highest death rate in the world.

The last statement of Mr. Kipling, no doubt, was questioned by many of the public, as we often hear the statement that "doctors never get sick;" they believe that the doctor is charmed and runs no risk whatsoever. If they would only pause to reflect upon the fact that a doctor is only a human being like other mortals, just as susceptible to disease; also upon the fact that every day of his life is spent as a constant com-

* Read at the Meeting of the Second District Medical Society, at Bloomington, May 9, 1909

panion of sickness, infections and maladies of all descriptions, they would readily see their error.

"To be doing good is man's most glorious task," says Sophocles. The inherent principles of medicine, its very foundation, are for good. Its primary object was and is to relieve the sufferings of humanity, and it does this, not only through the administering of medicine to the people for the alleviation of pain or cure of disease, but by educating them along the lines of how to prevent the disease, as well as what to do to rid oneself of disease, after it has fastened its hold.

Medicine has had among its students and practitioners some of the largest minds the world has ever known. The ancient Egyptians had Thoth or Hermes, who wrote six books on surgery, anatomy, therapeutics, general diseases, ophthalmology and gynecology. Moses was probably the first man to write and promulgate the principles of hygiene, and he surrounded these principles with religious ceremonies, so that they would be the better observed.

Arabian authorities assert that Solomon wrote a history of plants and animals. The Indians had their sacred sages or Munis. To the Greeks belong Aesculapius, the son of Apollo, by Coronis and one of the pupils of Charon. It was he who began the first cultivation of medicine. Hippocrates played such a great part in medicine that the Greeks called medicine the science of Hippocrates and the art of Aesculapius. It was Hippocrates who required all beginners to take the following oath: "I swear by Apollo, Aesculapius, by Hygeia and Panacea, by all the gods and goddesses, calling them to witness, that I will fulfill, according to my power and capacity, the following oath and promise: I will hold my master of medicine in the same rank as the author of my being; I will share with him my fortune, and, occasion permitting, I will provide for his want; I will consider his children as my brothers and, if they wish to learn the medical art, I will teach them without salary or price. I will share my precepts oral, and any lessons or knowledge, with my sons, with those of my master and with pupils bound by a promise, and an oath, in accordance with medical law and with no other person. I will direct the regime for the sick, for their good, according to my power and judgment, and I will abstain from all wrong and injustice. I will give no person any poison, though he ask for it; nor will I take the initiative in such suggestions; in like manner, I will use on no woman any instrument for producing abortion. I will pass my life and exercise my

art in innocence and purity. I will not practice the art of taking stones from the bladder, but will leave that for special practitioners. Into whatsoever house I enter, I will go for the cure of the sick, refraining from every voluntary corrupt act, and especially from the seduction of women and boys, free or slave. Whatever I see or hear in social life during practice, or even out of the practice of my profession, I will keep to myself, that which need not be divulged, regarding discretion as a duty in such any case. If I keep this oath, without breaking it, may it be given to me to enjoy happily my life and profession, always honored among men; if I violate it, may the contrary be my fate."

Many of the precepts contained in this oath can be followed by the medical profession of today with honor.

Prof. Adolph Harnack of the University of Berlin, one of the most distinguished critical historians of the modern era, presents incontrovertible arguments that the Apostle Luke was a physician, and has gathered all his arguments in a volume titled Luke, the Physician. The style of vocabulary of Luke's writings show that he had some insight into medicine. He evidently noticed the shortcomings of the profession of that day, for he remarks, "Physician heal thyself." It is very probable, then, that physicians have good grounds for their belief in the old tradition that one of their number was an active factor in the introduction of the ideas of the fraternity of the human race into the world which took place some 1,900 years ago.

Ever since the doctor has announced himself as an entity medicine has been shrouded in mystery and always connected with superstition by the uninitiated. This feeling was fostered by the practitioners for many ages; one can safely say until quite recently. It is now the duty of the physician to show the people that he is only a being in mind and structure, the same as they, the only difference being that he has trained his mind and faculties along certain lines, with the result that he is able to take care of their physical condition when that is disabled better than they themselves can.

The education of the public in regard to tuberculosis is making great strides, yet to this day let some one mention smallpox and everybody is ready to fly, but the mention of tuberculosis brings but the comment, "Poor fellow." Why is it thus? Is it not because of the physician's attitude in the past? When he called upon the smallpox patient he wore a bichlorid suit, placarded the house, and established an efficient quarantine. When he called upon the tubercular patient he

made his diagnosis, told the family his condition, and remarked, "We will see what we can do for him," all the time feeling that the patient's days were numbered. In the majority of cases neither patient nor family were instructed as to what measures were to be taken to prevent others from becoming infected. The husband and wife slept together; the victim, if able, went out and scattered his sputum where he would. Even to this day health officers in Indiana will tell you that only one-tenth of the cases of tuberculosis are reported by the physicians, whereas the law requires them to report every case. If this has been, and in many cases is yet, the attitude of the physician, what can you expect of the public who know no better?

The physician is playing a great part in the world's history. Through his knowledge and efforts the completion of the Panama canal was made possible. He has protected the country from invasions by the bubonic plague and cholera. What would our standing army or our immense navy amount to if it were not for the knowledge and ability of the medical men in waging the fierce battle against plague, cholera, and other infectious diseases? Each of the above institutions has a representative in the cabinet; in contrast to this, if a physician presents a law for the betterment of mankind, he is accused of graft; as an example, reflect upon the difficulties and objections which had to be overcome before the passage of the Pure Food Law was secured and the task that Dr. Wiley has at present in seeing that the law is complied with.

The requirements upon entering the study of medicine are becoming so high that only persons of independent means can wisely enter the study of medicine, yet the laws are so lax that the public has very little protection against patent medicine vendors and quacks.

Helmholtz probably has the distinction of being the first man of note to forward the idea of the necessity of educating the public. One fact to be remembered to be successful in our teaching is that we must attempt to the best of our ability to live as we teach.

The greatest strides in medicine at this time are being made in preventive medicine. Its reception by the laity is insidious; their minds are not prepared for it; they need educating; it is just a question of plodding onward with a calm zeal born of the knowledge of what can be accomplished. We can expect and accomplish more in teaching the children the principles of hygiene and a thorough knowledge of physiology because in them we have a receptive condition and are not compelled constantly to war with the false

impressions so indelibly present in the older generation. Pope says: "A wise physician, skilled our ills to heal, is more than armies to the public weal."

A prominent factor for good is the physician's ability to render spiritual assistance. It is not a question of the practitioner's belief, but what the patient believes; the aim to be achieved is the lowering of the patient's nervous tension and consequently his betterment. Therefore, if the physician sees that the patient has confidence in the power of spiritual assistance, it is his duty to advise him to seek spiritual counsel, no matter what the physician himself may think. As a rule, the minister has a better insight into the patient's mind and can affect him emotionally much easier than the physician. Many patients who come to us are afflicted with imaginary complaints, or, commonly speaking, a weakening of the backbone. It is to these that counsel directed toward the uplifting of mental and spiritual self will accomplish the greatest good.

Ever since the bad judgment of Adam and Eve there has been a tendency for man to give free rein to his desires, and the predominating factor of all his desires is selfishness. Schiller says: "The world is governed only by self-interest." I believe I can safely say that it is on account of selfishness that there are so many graduated in medicine. In 1907, not including all the pathies and isms, there was one physician to 636 people. The inducements held out to me and, as I afterward found out on inquiry, held out to the majority of young men who studied medicine, were that the physician's remuneration was far in excess in proportion to other professions or trades, and that prestige was a never-failing accompaniment. Even to this day of enlightenment the mass of people believe that all doctors amass riches early and die wealthy. As to the actual facts of the latter, we need not comment.

The leading factors in producing jealousy, discontent and cheapening of services among medical men are hospital abuse and contract practice. Hospitals are primarily charitable institutions, but by a process of evolution they have become institutions constantly imposed upon by the unscrupulous as well as the thoughtless. I have been told several times by men connected with hospitals in the larger cities that the physician from the country and smaller towns sends patients to them for operative measures, who pay their home doctor, yet when they get to the hospital will play the part of the person to whom charity is due and expect to receive all necessary treatment without any compensation to the doe-

tor. The injustice of this you can readily see: the doctor who sends his patients to the hospital should inform them as to their liabilities, and the operator as to the means of the patient. Many hospitals will contract with corporations or the employés themselves for a stipulated sum to furnish them with surgical attention and nursing. The hospital furnishes them the nursing and receives the money, whosoever happens to be serving as staff doctor at that time, furnishes the knowledge and ability and receives nothing. Where the justice lies in such a procedure I can not see. Every laborer should be worthy of his hire; yet doctors will barter their services for a mere pittance, and sometimes reputation is all they get out of it. It seems to me that where a doctor will give his services and frequently the medicine to a family for 50 or 75 cents a month that somebody is going to lose. The physician is going to do his best to get the most out of it. The logical sequence, as I see it, is that the patient is the losing member of the parties interested. The doctor who is employed in the above work is constantly busy; he is called upon many, many times to treat imaginary ills; his time for investigating his cases is limited; the time he should use for study is taken up in his work; he has no time for recreation and pleasure; if he applies himself to his patients, as he should, what is the result? Somebody or something is going to be neglected.

I doubt if there is any trade or profession that expends as much brain power as the doctor and receives as little compensation for his efforts. The doctor is a very necessary item in the progress of humanity and there is no reason why he should not be compensated for his labor.

Occasionally we find that some of the specialists have just a slight connection with the factor for evil, as, for example, in rebating to the physician for sending patients to them. The proposition is wrong. The family doctor should receive his proper remuneration for what actual labor or knowledge he has given, but there it should cease. If the ability of the surgeon is worth five hundred dollars he should charge the patient that and not more. Rebating smacks too much of commercialism. Many doctors complain that when they send a patient to a specialist they are often too careless with their remarks in the presence of the patient as to the treatment pursued by the family physician. Such remarks are due either to ignorance or lack of tact. If all doctors thought alike we would be living in the millennium. Many times the family physician is called upon to adopt measures as they become necessary, according to his views, before

the specialist is called in. Therefore, he should be entitled to some consideration.

A practice of the city physician that is to be deplored is the too free use of the obstetrical forceps in normal labors. As a rule, he feels that his time is too valuable to allow Nature to run its normal course; he applies the forceps, the result being that often the woman's perineum pays the price of his haste. If his time is too valuable to wait he should either charge for his time or refuse the case. No matter how skilled he may be in repairing the perineum, his adjustments of the parts will not be as efficient as that made by Nature.

One of the hardest fights the medical profession has before it is to teach the public how to discriminate between the quack and the conscientious practitioner. The old adage that "there is nothing new under the sun" holds true of quackery. Pilpay, who lived several hundred years before Christ, wrote a fable called "Ignorant Physician." In it we find the following passage: "There was once, in the remote part of the East, a man who was altogether void of knowledge and experience, yet presumed to call himself a physician." Nearly the same condition exists today. It is only occasionally that we find the quack to be a man of much knowledge; it is generally a case of more words. In his conversation he depends on the display of his vocabulary to impress the patient with the idea that his ability is unlimited. It is a sad commentary on the honorable profession of medicine that men graduate, receive state license, and are allowed to practice their nefarious tactics upon the public, who are notoriously ignorant as to their own make-up. If the public will ever understand that there is nothing mysterious about medicine the days of the quack will be about numbered.

A grievous fault of the country practitioner who is compelled to supply the patient with the medicine is the fact that he treats his patient with ready-made preparations. His grip is filled with combinations, prepared by various supply houses and labeled as to their efficacy in certain diseases. No matter what the peculiar conditions or the idiosyncrasies of the patient, he gets a La Grippe, Anti-Rheumatic, A. B. & S. or some other formula guaranteed to give best results in those individual complaints. It is a case of fitting the patient to the medicine and not the medicine to the patient. The country doctor is being continually approached by detail men who present their specialties with the assurance that their preparations are far better than those put out by other houses. Their contents are many and varied, but, many thanks to the Pure Food

Law, we are about 50 per cent. nearer their true contents than we were before its passage, and, if we are close observers of the reports of the Council on Pharmacy and Chemistry of the American Medical Association, we can be fully satisfied as to the ingredients that enter into the make-up of the 1,001 preparations handed us. The old-time doctor, who carries only fundamental drugs, as quinin, opium, ipecac and a few others, knew more *materia medica* and knew it better than the average practitioner of to-day. This brings us to the relation existing between the doctor and druggist. From actual experience I know that the druggist would rather spend thirty minutes in preparing a prescription and receiving a reasonable fee than be compelled to carry on his shelves a wasteful expenditure in the nostrums of the day. The fundamental drugs he always has on hand; with the nostrum he fills a prescription or two; then the doctor either forgets the preparation by reason of a new one being handed him or he changes because of not getting the results he anticipated. The result of either case is that the druggist has his shelves filled with an innumerable amount of nostrums, the contents of which have been only one-third or one-half used. The fight being made to prescribe U. S. P. and National Formulary preparations is a most worthy one and, should the physician follow it, his knowledge of *materia medica* will be increased to a remarkable degree and the patients will get better treatment.

If the student of medicine of to-day would begin his education with a preceptor he would not only learn how to handle his patients and the relations that should exist between doctors but would know a great deal more medicine.

The chief cause of the wandering by many of the profession of today from the straight paths of medicine which were laid down by the forefathers is the faulty methods, or, rather, the lack of teaching, in our medical schools. Every student is taught medicine, and he is taught with such vengeance that when he graduates there is no doubt in his mind but that he can diagnose any case of typhoid fever he may be called to attend without the slightest difficulty; but, as a rule, after practicing a while, he usually finds that he was mistaken. There are only a few schools that devote any time to ethics, to teaching the embryo physician how he should treat other doctors, and the relation that should exist between doctor and patient. All he is taught is medicine. If the student were taught that there are other things besides the knowledge of medi-

cine which enter into the make-up of a successful doctor not only would the patients be better off but harmony would prevail to much greater extent than it does now.

APPENDICITIS.*

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One really feels like offering an apology for venturing to write a paper on this subject. It has been discussed so frequently and so thoroughly before every medical society in this country during the last ten years that one would think that there was little more to be said upon the subject. However, I promise to be brief and not to attempt to say anything which is not a matter of common knowledge to those who have studied the subject at all during the last few years.

I am convinced that the great mass of the profession have not as yet accepted the conclusions of the surgeons relative to the treatment of appendicitis. I believe that there is still a preventable mortality of from five to ten per cent. in this disease and a preventable morbidity still greater, and that this mortality and this morbidity are due to the failure of a large number of the profession to accept the conclusions of the surgeons.

That we still have a considerable mortality is evidenced by referring to the personal experience of any of us or to the daily papers. Scarcely a week passes in any town of any size but what there is recorded one or more deaths from appendicitis. The awful thing about the mortality of appendicitis is the fact that the victims are nearly always persons in the prime of life and very useful persons in society. The prime cause of this preventable mortality is the failure of the mass of the profession to realize the fact that every case of appendicitis should be operated on within the first twenty-four hours.

There is now abundant evidence to prove that such a course would give us a mortality of a small fraction of one per cent. If this is true, and I am satisfied it is, why do we persist in trying to treat these cases medically? Granted that there are sixty or sixty-five per cent. of the cases of appendicitis that would recover under most any form of treatment, is it justifiable to risk the lives of the remaining thirty or forty per cent. when an early operation would save over ninety-nine out of a hundred?

*Read at 13th District Medical Meeting at South Bend, Ind., Nov. 18, 1908.

It has been proven that one can not tell at the outset in a given case of appendicitis whether it is going to be a mild catarrhal attack and recover in a short time under any treatment or whether it is going to be a virulent type, resulting in general peritonitis and death if not operated on early in the disease.

We know that as we trace these fatal cases of appendicitis a large majority are cases operated on the third, fourth or fifth day of the disease. It is then that we find the infection extending to all parts of the peritoneal cavity in those cases of general peritonitis, and in those cases that are going to develop localized abscesses the pus has not been definitely walled off as yet. We also know that even if a case recovers following operation after the third or fourth day that it is usually necessary to drain and we have the dangers of intestinal obstruction, fecal fistula and ventral hernia to encounter.

I believe that we are all cognizant of these facts: That the patient with appendicitis stands the best chance of permanent recovery if he is operated on within the first twenty-four hours; that if we defer the operation for a while thirty or forty per cent. will require operation anyway and of that number a large percentage will develop peritonitis and die and those who survive will have to run the gauntlet of sepsis, intestinal obstruction, fecal fistula and ventral hernia. If we know these things, and I believe we do, why do so many of us allow the golden opportunity (the first twenty-four hours) to elapse in our cases of appendicitis without insisting on operation? I think the reason is obvious. If Dr. A. is treating a case he fears if he insists too strongly on an early operation the family may not consent and may discharge him and may call in Dr. B., who may carry the case through successfully under medical treatment, or it may be that the family absolutely refuses early operations. However that may be, I think the fact is that the medical profession as a class have not taken the united stand on this question that they should or that their present knowledge warrants.

Reference to hospital statistics, inquiries of my confrères, and my personal experience convince me that only a very small per cent. of cases of acute appendicitis are operated on at a time when one can do an ideal operation (i.e., removal of the appendix and closure of the abdominal wound without drainage). This condition exists in spite of the fact that surgeons have unanimously proclaimed for the past ten years and nearly all the modern text-books on internal medicine admit that an operation dur-

ing the first twenty-four hours would give us the best possible percentage of recoveries in this disease. It must be admitted that this is not entirely the fault of the profession; that the doctor is not always called until the disease has existed for some time and that there is still some work to be done in educating the laity regarding the significance of the belly ache. However, the responsibility not only of advising early operation but also of instructing the laity that severe abdominal pain usually means something rests upon the physician, and, if my observations are correct, the profession is not doing its full duty in this disease. Unfortunately procrastination is not the only error that is being made in the treatment of a considerable per cent. of these cases. We still find a number of physicians who persist in administering purgatives and allowing patients to take nourishment in spite of the fact that it has been proven conclusively that to do so is to excite peristalsis, to aid in spreading the infection and to invite general peritonitis.

It has been proven conclusively, both clinically and experimentally (Stanton, Yates and others), that if every case of appendicitis at the outset were placed at absolute rest in the right lateral position, with the head of the bed elevated, and if peristalsis were limited by withholding food and medicine and by the administration of small doses of morphin hypodermically that the tendency to develop general peritonitis would be very slight. It has also been proved that in those cases which already have a general peritoneal infection when first seen a considerable per cent. of them when treated with this plan will subside with or without the formation of a localized abscess. I do not think, however, that these facts justify us in allowing the first twenty-four hours to elapse without insisting on operation. However, if for any reason we are compelled to treat the case medically, I think that we should take advantage of our present knowledge and treat then according to the Ochsner plan.

I now wish to say a few words about the Ochsner treatment. To refresh your memories I will say that this treatment consists of:

1. Absolute rest in bed, with the head of bed elevated at least twelve inches and patient on right side.
2. Absolutely nothing by mouth, not even water.
3. One gastric lavage, if patient vomits.
4. Saline enemas 3 to 4 oz. with tincture of opium 5 m. every four hours to relieve thirst

and quiet pain. Opium may be omitted as soon as pain subsides.

5. Morphin hypodermically if patient is restless or in great pain.

6. An ice bag or large hot boric dressing over abdomen. These may help to relieve pain and they tend to prevent making frequent and meddlesome physical examinations. Personally I would prefer the ice bag.

The Ochsner treatment I believe is now generally conceded to be the best treatment in all cases which, from necessity or choice, we desire to treat medically. It is the treatment of choice in certain cases of general peritonitis which I now wish to discuss briefly.

I have watched with great interest the conflict which has been waging during the last few years, in the surgical world, between radicals, who proclaimed that the time to operate on any case of appendicitis was as soon as you make the diagnosis; that there was no case of appendicitis in which it was justifiable to delay operation unless the patient was already moribund; and the conservatives, who insisted that in certain conditions the Ochsner treatment for several days and a late operation would give the best results.

I have heard the exponents of these antagonistic theories indulge in very heated arguments upon the proper time to operate and have been much confused as to which was right. However, the clouds are breaking and the radicals are rapidly coming over to the side of the conservatives. Surgeons are gradually finding out that the same laws which apply to other infections (i. e., pelvic and puerperal infections) apply also to appendicitis; that it is better to wait until the opsonins, phagocytes, etc., have a chance to get in their work and until the system has an opportunity to develop a greater degree of immunity.

If my observations are correct, the very large majority of surgeons now believe that in cases seen first in the third, fourth or fifth day, with either a general peritonitis of over thirty-six hours' duration, or a developing abscess not yet definitely walled off, it is better to use the Ochsner treatment and postpone operation until the seventh, eighth or tenth day, or until the formation of a definite abscess.

One is greatly tempted to operate immediately on this class of cases. He reasons that a short operation, the removal of the sources of infection and the relief of pressure in the peritoneal cavity can do harm, but the fact remains: a considerable per cent. of these cases die if operated on the third, fourth or fifth day. This fact has forced the majority of the most enthusiastic radicals to the conservative side of this question.

In conclusion allow me to summarize as follows:

1. The ideal treatment of appendicitis consists in the removal of the appendix in the first twenty-four hours. Children are especially susceptible to general peritonitis, and with them it is very difficult to maintain the absolute rest so essential to successful medical treatment—so early operation is especially desirable.

2. In all cases treated medically, the Ochsner treatment should be carried out. To this should be added the united attention of the internist and the surgeon with preparation for operation at any time.

3. Above all things, withhold food and purgatives. Use gastric lavage if patient vomits.

4. In those cases seen for the first time on the third, fourth or fifth day, with either a general peritonitis of over thirty-six hours' standing or a developing abscess, postpone operation, adopt the Ochsner plan and wait for the development of localized abscess. Many apparently desperate cases will improve and can be operated on successfully later.

5. In cases with a general peritonitis of not over thirty-six hours' duration operate at once.

THE ROLE THE NEISSEIAN COCCUS PLAYS IN CHILDLESS MARRIAGES

A SURGICO-PATHOLOGIC STUDY.

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In this day of strenuousness, when high finance and elite society are the predominating factors in the minds of the so-called "upper crust" and the excessive cost of the mere necessities of life is the worry of those of the lower stratum, the childless marriage seems a blessing rather than a curse during its first years. But the time finally comes when a fecundation is desired. It will be the aim of the writer to give briefly the rôle played by the gonococcus in man whereby it directly or indirectly prevents conception.

One out of every four healthy wives infected by gonorrhœic husbands, according to gynecologists, becomes sterile. This is not counting the "one child" cases whereby the postparturient field is contaminated with the Neisser coccus that is squeezed out during parturition, infecting a tissue that is ripe for infection, and forever closing the way for further ovulation excursions.

In this postgonorrhœal sterility both oviducts are not necessarily blocked from pus tube pathology, for the endometrium of the uterus needs

only the results of gonococcic infection to dislodge from it any product of conception that would seek development.

When it is estimated by good authority that 80 per cent. of men have had gonorrhea at some time during life (and the writer believes that after the infection has passed the triangular ligament, gland infections occur that remain pathologic, to a degree, throughout the remainder of life) it would logically seem that woman's hazard from infection from the husband, with the possibility of retained infection in the various glands, would sufficiently account for gonococcic sterility, yet the writer believes that the man himself plays an important part in this lack of auto-genesis in his not being able to deliver the sexual secretions for reproduction. In these cases, outside of malemission or false aspermia, where the semen is discharged into the urethra and reverts back into the bladder on account of interference from a stricture, aspermia or azoöspermia is present. Azoöspermia may be produced from double epididymitis where the efferential, epididymal or deferential ducts are blocked. The gonococcus, in producing epididymitis, has already invaded the ejaculatory ducts, prostate and seminal vesicles, and azoöspermia differs from aspermia merely in the position of the pathology.

Aspermia and azoöspermia are produced in the following way: The gonococcus, after passing the membranous urethra, invades the sinus pocularis in the prostatic urethra; through the outer walls of the latter it invades the prostatic ducts and acini; through the lateral walls it infects the ejaculatory ducts and finally contaminates the seminal vesicles and vasi ampulae. The duct lumen is so minute that it is reasonable to believe that nonpatency would occur here in the same way that it occurs in the Bartholin duct. Obliteration follows the inflammatory process. With further progress of the process the morphology of the vesicle is lost and a fusing of the vesicles and vasi occurs, producing a horseshoe shaped mass.

The writer was able to find in two out of one hundred bladder dissections atresia of the utriculus masculinus. The solution of this anomaly is that most likely the inflammatory products sealed the lips of the sinus pocularis and resolution covered the whole utricle with mucous membrane.

With this whole system of fecundation blocked from the testes to the prostatic urethra, orgasm would still occur during sexual intercourse, followed only by a few drops of secretion from Cowper's glands.

The genito-urinary surgeon is somewhat handicapped in his efforts to correct this pathology on

account of the vast destruction of tissue following Neisser's coccic infection. However, with proper surgical attention, a marked degree of benefit is attained and sometimes the way is opened for the passage of spermatozoa.

CONCLUSIONS.

Rectal examinations for vesicular and prostatic invasion should be made more frequently by practitioners. It is cleaner than the mouth, so bacteriologists tell us, and an examination there frequently makes the whole diagnosis.

After once having gonorrhea, the subject is continually under suspicion, even after the Neisser coccus has been looked for negatively. The wife, who is probably infected, should be kept under control, even at the expense of the husband's exposure; first, because it is her life to protect; second, because man's commissions are facts fairly well established historically.

Prevention of the spread of the disease rather than the production of fecundity should be the prominent thought of the medical adviser. Some cases will require prostatectomy and vesicectomy in order to gain relief and to remove the seat of danger.

The medical man should, with or without law, protect the innocent healthy girl from the ravages of a wedlock with a man having gonorrhœic infection.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

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(Continued from page 329, Vol. II.)

EPIDEMICS.

During the early forties an epidemic of erysipelas prevailed in a number of counties in Indiana, notably in Dearborn, Ripley and Decatur counties, and was known by the popular name of "black tongue."

In the *Western Lancet*, November, 1843, Dr. George Sutton of Aurora contributed an article entitled, "Remarks on an Epidemic Erysipelas, Known by the Popular Name of 'Black Tongue,' Which Prevailed in Ripley and Dearborn Counties, Indiana." This article, like everything else that Dr. Sutton wrote, is valuable. The entire article was of so much merit that it was reproduced in the English work of "Nunneley on Erysipelas." I have the American edition of this work before me (Barrington and Haswell, 1844),

and the article begins at page 85. An extract from Dr. Sutton's paper will illustrate the character of the disease:

"The following is a synopsis of the symptoms of this epidemic. When the throat was the part attacked, after the usual premonitory symptoms which have been frequently mentioned had continued for two or three days, the patient was generally seized with a chill, which lasted in many cases four or five hours. This was followed by a high fever, swelling of the tonsils, submaxillary, parotid, and lymphatic glands of the neck; neuralgic pains, darting over the side of the neck and head, frequently following the temporal artery; tongue, covered at first with a thick brown coat, soon became swollen and often very dark in the center; deglutition frequently very difficult; pulse generally full, though easily compressed; skin at first hot and dry, becoming moist and continuing so after venesection. In the mild form of the disease these symptoms were frequently removed at once by an active antiphlogistic course of treatment. Sometimes the mild form had only the appearance of *cynanche tonsillaris*, but in the more malignant form, where the throat was affected, after the above symptoms had continued for two or three days, and sometimes from the very commencement, the pharynx became of a dark purple color. This color generally spread over the palate, tongue, and sides of the cheeks, the tongue becoming very much swollen, assuming a blackish-brown color; deglutition in many cases was almost impossible. In most of these cases an erysipelas would commence at the angle of the mouth or nose and spread over the face and head, with all the symptoms peculiar to that disease. The inflammation of the throat was seldom stationary; sometimes passing down the trachea, with symptoms resembling laryngitis, or *cynanche trachealis*, and at last assuming the symptoms of pneumonia. Sometimes this inflammation passed into the nostrils, and from them into the frontal sinuses; sometimes apparently into the antrum maxillary, but in nearly every case that I saw the throat became well while the erysipelas was spreading over the skin."

In the State Transactions for 1852, page 33, may be found a "Report of the Committee on the Practice of Medicine," in which Drs. M. H. Harding of Lawrenceburg, Ezra Read of Terre Haute, and John W. Moodey of Greensburg discuss epidemics of searlatina prevailing in 1837-8 and 1846-7. Also epidemics of dysentery, which prevailed at intervals from 1849 to 1852, and which was especially fatal in 1851 and 1852. Dr. Moodey, who was my preceptor, told me that his

experience in these epidemics of dysentery was so distressing that he would often come home in the evening discouraged, after having visited from home to home, throw his saddle-bags upon the floor, and declare in his despair that he would see no more patients, but on the morrow the demand of the sick and call to duty was so pressing that he again rallied and went on his sorrowful rounds. I was a boy of eleven years in 1851, but remember distinctly of an older sister, living in Rush County, who lost three children in one week from dysentery.

At the session of the state society in 1852 a committee was appointed to ascertain in what counties and townships the "milk sickness" prevails, and whether this disease disappears upon the removal of the forests and cultivation of the land; whether it prevails to the same extent upon the highlands that it does upon the alluvial bottoms, and any other facts relating to this disease. The query arose as to whether intermittent, remittent, congestive, and continued fevers were on the increase or decrease.*

Cholera prevailed to quite an extent, especially along the navigable water courses of Indiana, in 1849 to 1852.

The reader is referred to an exhaustive paper by Dr. George Sutton, "A Report to the Indiana State Medical Society on Asiatic Cholera as it Prevailed in this State in 1849-50-51-52." State Transactions, 1853, page 109.

Those days of epidemics antedated by many years the discovery of the germ theory of disease, but the physicians of that period were men of sound judgment and practical sense and managed their cases discreetly.

The Transactions for 1852, page 7, record a series of resolutions upon the death of Dr. Henry M. Dowling of New Albany. Nothing is said concerning the date of his birth, nor exact date of his death. He was present at the formation of the state society, and as such deserves this trifling recognition.

The Transactions for 1864, page 9, records the following resolution:

That this Society regard with profound regret and sorrow the decease of our lamented confreres, Drs. [Calvin] West, [Talbott] Bullard, Elliott, and Wilson; that we will cherish their memories in grateful remembrance, and emulate their virtues.

The Christian name of each one is omitted, and I am only able to determine definitely those of West and Bullard.

They were affected by fads in the early days of our state society, much as we are at the pres-

* See report of Dr. J. S. McClelland, Jefferson, Clinton County, State Transactions 1854, p. 43. No positive conclusions were reached, but the information is valuable.

ent time. In 1856 Dr. David Hutchinson was appointed to report on blood-letting in epilepsy, and in the Transaetions for 1857, page 8, he says:

"Having examined the literature of the subject, I find that none of our recent authorities have any confidence in blood-letting as a remedy in epilepsy, but, on the contrary, an opposite mode of treatment is advised, the disease being one of debility instead of plethora." Upon this statement the committee was discharged.

One resolution desired a committee to report a universal fee-bill for the entire state! I find no record of a report.

The slaughter of the innocents was prevalent in the sixties and was condemned by resolutions denouneing criminal abortion at the meeting in 1860.

The advantages of vaccination were emphatically urged by resolutions in 1860.

White lead as a remedy for superficial burns came into favor in the early sixties, being especially recommended by the late Prof. S. D. Gross. It was discussed and a committee was appointed to investigate its claims. Whether the remedy lost out or the committee grew careless I can not say; but they made no report.

A committee was appointed to investigate "the evil effects of tobacco." The committee, long since dead, made no report.

A word of praise is due the late Dr. Calvin West of Hagerstown, who, in the early sixties, became an enthusiast over the microscope and made a number of valuable annual reports upon his investigations in the Transaetions.

LEGAL ENACTMENTS.

At every session of the society charlatanism was deplored, and the Legislature was urged to enact such laws as might be requisite for the protection of the state from incompetent and reckless practitioners of medicine and surgery, as well as those who dispensed drugs. Such requests were not unreasonable.

Quackery has always annoyed the profession of our state. As an unbidden guest, it has stalked in our presence, and, like the poor, will, possibly, never cease out of the land. In the early history of our state there were stringent laws upon our statute books regulating the practice of medicine. Possibly they were too drastic for those primitive days. Physicians of high grade could not always be secured, nor properly compensated for their services, and so men of the "Doe Sifers" stamp and unskilled midwives were suffered, through sympathy, to attend our early

inhabitants. Nevertheless, politicians have, as a rule, been the friends of quackery and the scorners of legitimate medicine.

At the session of the state society held at New Albany, May 19, 1852, a memorial from the Evansville Medical Society was presented, and, as it is a fair exponent of the early medical legislation, I shall copy the relevant portion:

Transactions 1852, page 6: "The Evansville Medical Society having had their attention called to the existence of a large body of irregular physicians, whose ignorance and incapacity exert a manifest injury, both upon the community among whom they practice and the profession whose calling they degrade, and, being anxious, so far as lay in their power, to redress this grievance, appointed a committee to report upon the laws of the state of Indiana, formerly bearing upon this subject."

"The committee reported that several laws upon this subject were passed in the years 1816, 1825, and 1830, entitled acts for the better regulation of the practice of medicine in the state of Indiana.

"The first of these acts, passed in the session of 1816, had for its object the organization of the profession into boards of supervision corresponding with the judicial districts of the state. Provision was made for their perpetuation. Authority was conferred upon them to examine and license to practice any applicant whom they might consider properly qualified. It affixed a rate or scale of charges for medical services. And, lastly, declared that any person practicing medicine in the state, unless properly authorized so to do, either by the license of the examining board or otherwise, should not have the assistance of the law in collecting a remuneration for his services.

"The act of 1825 had for its object the better organization of the medical profession. It granted charters to a central state society and to local societies, corresponding to the judicial districts;* enforced the regulations already made, and provided for the continuation of the societies by fixed rules of representation.

"The act of 1830 provided for the remedying of certain defects in the old law and for enforcing its regulations by denying the aid of the law to collect the bills of irregular practitioners.

* In the early days of Indiana, physicians were licensed to practice medicine by certificates granted by judicial or medical districts. Dr. John W. Cook of Pendleton, has kindly permitted me to copy one of these papers issued to his father, the late Dr. Ward Cook of Pendleton. In 1832. It is printed on a good quality of parchment; the seal, stamped on paper, showing an open lancet, is obscure. Dr. Dickinson Burt, who signs this certificate as secretary, was the first physician to locate in Delaware County. These certificates are mentioned elsewhere.

"Since 1830 these laws have all been repealed and none others enacted in their places."

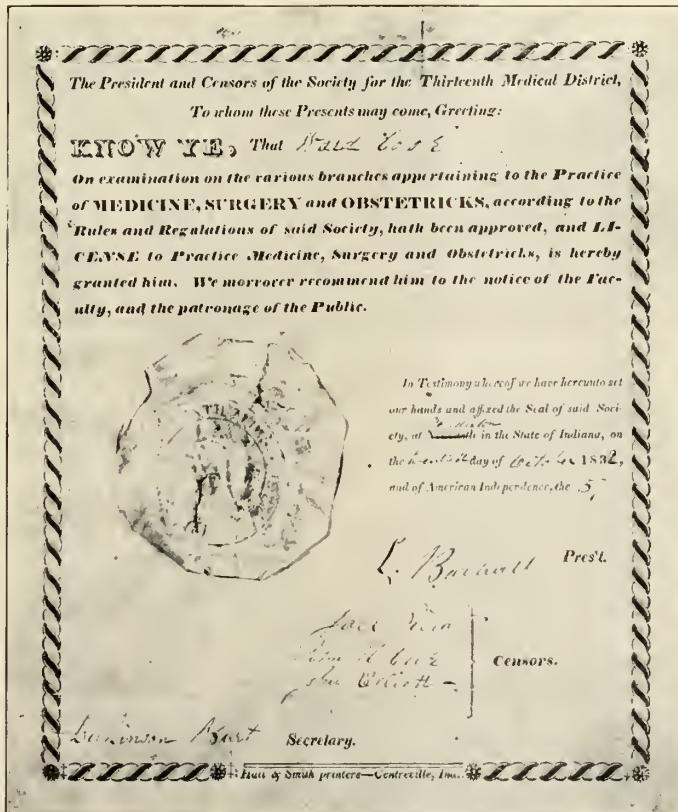
The repeal of these medical laws left our state at the mercy of any one who chose to assume the name of "doctor" for the next fifty-five years.

RECENT LEGISLATION.*

The first legal attempt in recent years in any manner to regulate the practice of medicine, surgery and obstetrics in the state of Indiana was made during the session of the State Legislature of 1885.

2. Attendance upon one term of medical lectures and three years of practice immediately preceding the passage of this act, in the county where application was made, together with proof of good moral character, entitled the applicant to continue practice.

3. Any physician who had been engaged in practice in the state for ten years immediately preceding the passage of this act, upon proof of this fact, and also good moral character, was likewise permitted to continue in practice. This



Certificate issued in 1832

This act specified three classes of practitioners who should be permitted to practice under the protection of the law. It provided a system of registration in the counties wherein the applicant proposed to practice, and the conditions under which certificates were issued by the clerk of the court were as follows:

1. Graduates of reputable medical colleges presenting a diploma as proof of such graduation, supported by the testimony of two witnesses as to the moral character of the applicant.

law practically disturbed no resident practitioner at the time of its passage in the state.

Another provision stipulated that after a specified date only those who were graduates of reputable medical colleges should be permitted to begin practicing within the borders of the state.

This law was not perfect, but it marked the beginning of a return to the old laws of real worth which had been enacted and repealed early in the history of the state. It was imperfect in that it left the moral standing of the applicant, and the reputability of the college, to the judgment of the clerk of the court, from which there

* The author desires to acknowledge valuable assistance rendered by Dr. George R. Green of Muncie, in this résumé of recent State laws.

was no appeal. There was no regular standard by which to measure the requirements, and the decisions were characterized by a remarkable degree of elasticity.

LAW OF 1897.

The act of 1897, while replacing the act of 1885, provides that all physicians who had registered under the act of 1885 and have been in continuous practice in the state since that date shall be permitted to register under the new law.

This law also created the Board of Medical Registration and Examination, to which all applications for registration must be made, and whose duty it is to issue permits in the way of certificates setting forth that applicants have complied with the provisions of the law. On the presentation of these certificates to the clerk of the court in the county in which the applicant lives and proposes to practice, and the payment of a proper fee, a license is issued by the clerk. In case of removal from one county to another the license in the first county is to be deposited in the new county as evidence and a new license issued in lieu of it at the last residence.

Under this law (1897) the applicant must be a graduate of a reputable medical college, and the standard of the colleges is determined by the Board of Medical Registration and Examination. This board also has power to determine the preliminary educational requirements of applicants. After February, 1903, the board requires an entrance qualification, the minimum requirement being a high school diploma or equivalent documentary evidence of education. If the applicant can not furnish such diploma as documentary evidence then the board gives an examination.

Prior to January, 1903, the entrance requirements were the same as those prescribed by the Association of American Medical Colleges.

In 1905 the law was amended so as to add an osteopath to the Board of Medical Registration and Examination.

Under certain regulations, reciprocal agreements exist between certain states.

This law is handicapped in view of the fact that the state leaves the entire financial care of the board, together with its expenses, including expenses incurred in punishing violations, to the board itself, and there is no provision for its financial maintenance except that which the board is able to secure in fees from those who come before it for examination. No other body of men in the state is required to finance the enforcement of a state law, except physicians, and they are the only body of men willing to do it!

LAW OF 1909.

The Legislature of 1909 enacted a law regulating maternity hospitals, boarding houses for infants, and boarding homes for children, and the placing of infants. It provides for licenses by the board of state charities, fixes liability for the care of infants, prohibits the sending of pregnant women to other counties where their children become public dependents, etc. This bill is beneficent, as it will prevent the heretofore nefarious baby-farms which have in many instances flourished as adjuncts to the many illicit so-called maternity hospitals.

THE STATE BOARD OF HEALTH.

In 1891 the general law creating the State Board of Health was enacted.

In 1901 the regulation of the discharge of factory refuse into the streams in the state was made a part of the duty of the board.

In 1903 further legislation was enacted requiring physicians or householders to report all cases of suspected contagious diseases to the Board of Health. It also provided for the establishment of quarantine, and detailed penalties for violations.

In 1905 a bill was enacted providing for the establishment of a Laboratory of Hygiene and defining its duties.

In 1907 further legislation was enacted on the subjects of marriages, births, deaths, diseases and burial permits, and prescribed penalties for violations. Also in this year the pure food and drug bill was placed upon the statute books, making the chemist of the State Board of Health a food and drug commissioner, and defining his duties, and placing the legal enforcement of this law under the supervision of the State Board of Health. Here, again, lack of funds have hindered the efficiency of the law.

In March, 1909, the Legislature passed an amendment to the former laws regulating the Board of Health. The duties of the State Board of Health are defined and increased. The name of the county health officer is changed to County Health Commissioner. He is to be elected on the first Tuesday in January, 1910, and every four years thereafter. "In every incorporated city there shall be a department of health composed of a board of three commissioners, not more than two of whom shall be of the same political party, and at least two of whom shall be physicians well informed in hygiene and sanitary science, and who shall be appointed by the mayor of such incorporated city for the term of four years, and who shall be known as the City Board of Health."

*SESSIONS OF THE INDIANA STATE
MEDICAL ASSOCIATION.*

After the formation of the society it was migratory for a time, then was stationary at Indianapolis for a number of years, and again became migratory.

The places of meeting were: 1849 to 1851, 1855 to 1864, 1866 to 1895, 1899, 1904 and 1907, at Indianapolis; 1852, New Albany; 1853 and 1898, Lafayette; 1854 and 1902, Evansville; 1865 and 1903, Richmond; 1900, Anderson; 1901, South Bend; 1896, Fort Wayne; 1897 and 1909, Terre Haute; 1905, West Baden; 1906, Winona Lake, and 1908, French Lick. Total: Forty-five times at Indianapolis and fifteen times at other cities.

The meetings were held either in May or June, except in 1862, when the Civil War interrupted, but a call session occurred the same year, November 18 and 19. At the session held at French Lick in 1908 it was voted that hereafter meetings shall be held in the autumn.

CHANGES IN THE STATE SOCIETY.

At the session of the society held at Evansville (1902), were elected for the first time, members of the House of Delegates of the American Medical Association, as follows: For the long term, Drs. G. W. H. Kemper and Edwin Walker; for the short term, Drs. W. N. Wishard and D. C. Peyton.

At the next session of the society, held at Richmond (1903), the Indiana members of the House of Delegates submitted a written report (see Transactions, 1903, p. 392) to the society, recommending that the present state society adopt the new constitution as planned by the American Medical Association for the government of state associations. The national association at New Orleans (1903) had made the change, and substituted for the time honored "Code of Ethics" the new form of government, to be based on the "Principles of Medical Ethics of the American Medical Association." On motion the new constitution and by-laws were adopted. It was not to go into effect until the hour of adjournment of the annual meeting, except that the president was to appoint the councilors provided for.

Prior to this time the business of the society was conducted in general session. Thenceforth the general sessions were to be confined to the reading and discussion of papers, while all business was to be transacted by the House of Delegates.

With the session of 1904 the society was under the new form of government and the name of "society" was changed to "association."

The proceedings of each session were published in an annual volume until and including 1907—making fifty-eight in all—when the plan was discontinued. At the 1907 meeting Dr. G. F. Keiper made a motion, which was adopted, "That the council shall take such steps as they may deem wise toward the creation of a monthly medical journal as the organ of this state society, to take the place of the present Transactions: that this be the recommendation of the House of Delegates to the council, to report next year."

In accordance with this resolution the first number of *The Journal of the Indiana State Medical Association*, as a monthly journal, was issued in January, 1908, at Fort Wayne, Ind. Dr. Albert E. Bulson, Jr., was made editor and manager.

PRESIDENTS OF THE INDIANA STATE MEDICAL ASSOCIATION.

Names and Residence.	Elected.	Served.
*Livingston Dunlap,† Indianapolis.....	1849	1849
*William T. S. Cornett, Versailles.....	1849	1850
*Asahel Clapp, New Albany.....	1850	1851
*George W. Mears, Indianapolis.....	1851	1852
*Jeremiah H. Brower, Lawrenceburg.....	1852	1853
*Elizur H. Deming, Lafayette.....	1853	1854
*Madison J. Bray, Evansville.....	1854	1855
*William Lomax, Marion.....	1855	1856
*Daniel Meeker, Laporte.....	1856	1857
*Talbott Bullard, Indianapolis.....	1857	1858
*Nathan Johnson, Cambridge City.....	1858	1859
*David Hutchinson, Mooresville.....	1859	1860
*Benjamin S. Woodworth, Fort Wayne.....	1860	1861
*Theophilus Parvin, Indianapolis.....	1861	1862
*James F. Hibberd, Richmond.....	1862	1863
*John Sloan, New Albany.....	1863	1864
*John Moffett (acting), Rushville.....	1864	1864
*Samuel M. Linton, Columbus.....	1864	1864
*Myron H. Harding, Lawrenceburg.....	1865	1865
*Wilson Lockhart (acting), Danville.....	1865	1866
*Vierling Kersey, Richmond.....	1866	1867
*John S. Bobbs, Indianapolis.....	1867	1868
*Nathaniel Field, Jeffersonville.....	1868	1869
*George Sutton, Aurora.....	1869	1870
*Robert N. Todd, Indianapolis.....	1870	1871
*Henry P. Ayres, Fort Wayne.....	1871	1872
*Joel Pennington, Milton.....	1872	1873
*Isaac Casselberry, Evansville.....	1873	1874
*Wilson Hobbs, Knightstown.....	1873	1874
*Richard E. Haughton, Richmond.....	1874	1875
*John H. Helm, Peru.....	1875	1876
*Samuel S. Boyd, Dublin.....	1876	1877
Luther D. Waterman, Indianapolis.....	1877	1878
*Louis Humphreys, South Bend.....	1878	...‡
*Benjamin Newland (acting), Bedford (V.-P.)	1878	1879
*Jacob R. Weist, Richmond.....	1879	1880
*Thomas B. Harvey, Indianapolis.....	1880	1881
*Marshall Sexton, Rushville.....	1881	1882
William H. Bell, Logansport.....	1882	1883
*Samuel E. Munford, Princeton.....	1883	1884
*James H. Woodburn, Indianapolis.....	1884	1885
*James S. Gregg, Fort Wayne.....	1885	1886
General W. H. Kemper, Muncie.....	1886	1887

*Samuel H. Charlton, Seymour	1887
William H. Wishard, Indianapolis.....	1888
*James D. Gatch, Lawrenceburg.....	1889
*Gonsolvo C. Smythe, Greencastle.....	1890
Edwin Walker, Evansville.....	1891
George F. Beasley, Lafayette	1892
Charles A. Daugherty, South Bend.....	1893
*Elijah S. Elder, Indianapolis.....	1894
Charles S. Bond (acting), Richmond ..	1894
Miles F. Porter, Fort Wayne.....	1895
James H. Ford, Wabash.....	1896
William N. Wishard, Indianapolis.....	1897
John C. Sexton, Rushville.....	1898
Walker Schell, Terre Haute.....	1899
George W. McCaskey, Fort Wayne.....	1900
Alembert W. Brayton, Indianapolis.....	1901
John B. Berteling, South Bend.....	1902
Jonas Stewart, Anderson.....	1903
George T. McCoy, Columbus.....	1904
*George H. Grant, Richmond.....	1905
George J. Cook, Indianapolis.....	1906
David C. Peyton, Jeffersonville.....	1907
George D. Kahlo, French Lick.....	1908
....	1900
....	1901
....	1902
....	1903
....	1904
....	1905
....	1906
....	1907
....	1908

PRESIDENTS OF THE AMERICAN MEDICAL
ASSOCIATION.
(From Indiana).

Theophilus Parvin	1879
James F. Hibberd	1894

*Dead. †State Medical Convention. ‡Resigned.

SPECIAL ARTICLES

ARSENICAL LIQUORS.

W. H. FOREMAN, A.B., M.D.
AND
J. H. GERTLER, PH.G., PH.C.
INDIANAPOLIS.

The official liquors of arsenic are:

1. Liquor acidi arsenosi (Valangan's solution).
2. Liquor potassii arsenitis (Fowler's solution).
3. Liquor sodii arsenatis (Pearson's solution).
4. Liquor arseni et hydrargyri iodidi (Donovan's solution).

Liquor acidi arsenosi and liquor potassii arsenitis each contains one per cent. of arseni trioxidi; liquor sodii arsenatis contains one per cent. of sodii arsenatis exsiccati; liquor arseni et hydrargyri iodidi contains one per cent. each of arseni iodidi and hydrargyri iodidi rubri. (Care must be taken not to prescribe the liquor sodii arsenatis of the U. S. P. for that of the N. F., as the latter is only one-tenth as strong.)

Liquor acidi arsenosi is acid in reaction, containing acidum hydrochloricum dilutum; liquor potassii arsenitis is alkaline, containing potassii bicarbonas; liquor sodii arsenatis and liquor arsenii et hydrargyri iodidi are neutral.

II. Special care must be taken in prescribing the solutions of arsenic with other drugs:

1. That no chemical incompatibility occurs. This may be avoided by observing the chemical reaction of the various preparations with which the solutions of arsenic are prescribed, remembering that in acid solutions the liquor acidi arsenosi should be used, in alkaline solutions the liquor potassii arsenitis, in neutral solutions the liquor sodii arsenatis. Examples of incompatibility:

R.	
Liquoris potassii arsenitis	gtt. lxii 5|000
Tinctura ferri chloridi.....	.3i 4|000
Glyeerini .....	.3ii 8|000
Aquaæ q.s. ad.....	.3iii 90|000
Misce et fiat solutio.	

In this prescription the alkaline bicarbonate renders the prescription alkaline in reaction and therefore precipitates the iron in the form of ferrie hydroxid, the ferrie hydroxid then combines with the potassium arsenite, converting it into the insoluble ferrie arsenate. Liquor acidi arsenosi should have been used instead of the liquor potassii arsenitis.

R.	
Liquoris potassii arsenitis, .	5i 4|000
Hydrargyri chloridi corrosivi.....	gr ii 0|130
Aquaæ q.s. ad.....	.3iv 120|000
Misce et fiat solutio.	

In the above the alkaline solution precipitates the mercury as the oxid, forming a yellow precipitate on standing for some time. By adding potassii iodidum no precipitate will be formed.

2. That no pharmaceutical incompatibility occurs—i. e., that the arsenic in solution is not precipitated. For example:

R.	
Liquoris sodii arsenatis	gtt. ii 8|000
Tineturæ nucis vomiae.....	.3ii 8|000
Tinctura gentianæ compositæ.....	.3iii 90|000
Misce et fiat solutio.	

The above solution being strongly aleoholic, and the sodium arsenate practically insoluble in alcohol, a microscopic precipitate is formed.

Outside of their insolubility in alcohol there are scarcely any pharmaceutical incompatibilities for arsenical solutions.

3. That no therapeutic incompatibilities occur. By therapeutic incompatibilities with arsenic we refer especially to the dosage and that no mistake be made in the preparation prescribed. It is permissible here as in most drugs to prescribe a drug that has a corrective or modifying action, even though there be a therapeutic incompatibility, unless such corrective or modifying agency be manifestly undesirable or modify to too great an extent the principal remedy. For example:

R.		
Arseni trioxidi.....	3ii	8|000
Potassii iodidi	3ii	8|000
Syrupi sarsaparillæ compositi q.s ad.	3iv	120|000
Misce et fiat solutio.		

In this prescription the wrong preparation has been prescribed; hence the dose is too large (therapeutic incompatibility) and the arsenic is insoluble (pharmaceutical incompatibility).

R.		
Liquoris sodii arsenatis.....	3i	30|000
Ferri citratis.....	3i	4|000
Aquaæ q.s. ad.....	3ii	60|000
Misce et fiat solutio.		

In the above the National Formulary preparation was intended. This preparation when written in a prescription should always be followed by N.F. to avoid serious mistakes.

III. In practice it is often advisable to prescribe the solutions of arsenic with preparations of iron, bitters, stomachics, nerve sedatives, heart tonics, expectorants, or other alteratives as adjuvants.

1. With preparations of iron: Most of the official preparations of inorganic iron are acid in reaction and with these may only be prescribed liquor acidi arsenosi. For example:

R.		
Tinctura ferri chloridi.....	3iiss	10|000
Liquoris acidi arsenosi.....	3i	4|000
Glycerini	3i	30|000
Aquaæ q.s. ad.....	3iv	120|000
Misce et fiat solutio.		

Sig.: Dessertspoonful in wineglass of water after meals.

In this prescription both the arsenic preparation and the iron contain hydrochloric acid, making them perfectly compatible. The glycerin acts as a preservative, preventing the precipitation of the iron as the subchlorid.

R.		
Liquoris acidi arsenosi.....	gtt. xxxvi	2|350
Liquoris ferri et ammonii acetatis		
q.s. ad.....	3vi	180|000
Misce et fiat solutio.		

Sig.: Tablespoonful in wineglass of water after meals.

In above prescription both solutions are acid, thus rendering them compatible. Part of the iron is converted into ferric chlorid, thus causing the solution to become a lighter color.

R.		
Liquoris acidi arsenosi.....	gtt. lxxii	5|000
Glyceriti ferri, quininæ et strychninæ phosphati.....	3vi	24|000
Aquaæ q.s. ad	3iii	90|000
Misce et fiat solutio.		

Sig.: Teaspoonful in small amount of water after meals.

The glycerite contains phosphoric acid; therefore compatible with the acid liquor.

R.		
Liquoris acidi arsenosi	3i	4|000
Syrupi ferri iodidi.....	3iv	15|000
Elixirs aromatici q.s. ad.....	3iii	90|000
Misce et fiat solutio.		

Sig.: Teaspoonful in water after meals.

The syrup contains hypophosphorous acid and is therefore compatible with the acid liquor. Syrupus ferri iodidi can also be dispensed with liquor sodii arsenatis, or liquor potassii arsenitis; in the latter a slight precipitate of ferrous carbonate will be formed if the liquor be in excess of the syrup.

The scale salts of iron form a distinct class of preparations in regard to their general precipitants in the fact that they are not precipitated with alkalies, as are most of the other preparations of iron. Ammonia water is used to render them soluble and other alkalies as a general rule do not affect them. Some of these preparations, however, contain alkaloids which are precipitated by alkalies in excess.

The following preparations do not contain alkaloids and may therefore be dispensed with either the liquor potassi arsenitis or the liquor sodii arsenatis:

Ferri citras, ferri et ammonii citras, vinum ferri, ferri et ammonii tartras, ferri et potassii tartras.

The following scale salts of iron either contain alkaloids or have the iron combined in such a way as to be precipitated by alkalies and therefore must only be dispensed with liquor sodii arsenatis:

Ferri et quininæ citras, vinnm ferri amarum, ferri et quininæ citras solubilis, ferri et strychninæ citras, ferri phosphas solubilis, ferri pyrophosphas solubilis. For example:

R.		
Liquoris sodii arsenatis		
Ferri et strychninæ citratis aa.....	3ss	2|000
Syrupi	3iss	45|000
Aquaæ q.s. ad	3iv	120|000
Misce et fiat solutio.		

Sig.: Dessertspoonful in water after meals.

Both the iron and strychnine in the above are compatible with the neutral solution.

R.		
Ferri et ammonii citratis.....	3i gr. iv	4|26
Liquoris potassii arsenitis.....	3i gtt. xx	5|20
Aquaæ menthae piperitaæ q.s. ad.....	3iv	120|000
Misce et fiat solutio.		

Sig.: Dessertspoonful in water after meals.

Alkalies render the above preparation more soluble.

R.		
Liquoris potassii arsenitis.....	3i	4|00
Vini ferri q.s. ad.....	3iv	120|000
Misce et fiat solutio.		

Sig.: One or two teaspoonfuls in water after meals.

R.		
Liquoris sodii arsenatis.....	3i	4|00
Vini ferri amari q.s. ad.....	3iv	120|000
Misce et fiat solutio.		

Sig.: One or two teaspoonfuls in water after meals.

Vinum ferri amari contains the alkaloid quinia and should not be used with liquor potassii arsenitis.

The so-called preparations of "organic iron," such as the peptonate, which are not official but found in the National Formulary, are generally alkaline in reaction and therefore must not be dispensed with the liquor acidi arsenosi.

2. With simple bitters and stomachics. The following are the important simple bitters and stomachics which may be prescribed with the solutions of arsenic: Gentian, quassia, calumba, nux vomica, cinchona, hydrastis, taraxacum, serpentaria. For example:

R.		
Liquoris acidi arsenosi.....	.5i	4|000
Tincturæ nucis vomicæ.....	.5i	4|000
Elixir aromatici q.s. ad.....	.5ii	60|000
Misce et fiat solutio.		
Sig.: Teaspoonful in water after meals.		

The tincture and solution are both acid in above; therefore compatible.

R.		
Liquoris potassii arsenitis.....	.5i	4|000
Fluidextracti taraxici.....	.5iv	15|000
Glycerini .....	.5iv	15|000
Aqua cinnamomi q.s. ad.....	.5ii	60|000
Misce et fiat solutio.		
Sig.: Teaspoonful in water after meals.		

In the above both of the solutions are alkaline, therefore compatible.

Fluid extracts precipitate in aqueous solutions, but the glycerin to a great extent prevents this from occurring.

R.		
Liquoris sodii arsenatis .....	.5i	4|000
Glyceriti hydrastis q.s. ad.....	.5ii	60|000
Misce et fiat solutio.		
Sig.: Teaspoonful in water after meals.		

In the above both preparations are neutral, therefore no incompatibility.

In dispensing liquid preparations of arsenic with organic preparations, such as alkaline or acid tinctures or fluid extracts, care should be used to select the solution that is of the same reaction as the organic preparation used.

3. With simple bitters and iron. Of the so-called bitters (gentian, calumba and quassia) gentian contains gentisic acid, which forms a greenish precipitate with ferric salts. In prescribing the same a slight excess of iron should be used and directions given to filter. For example:

R.		
Ferri et ammonii citratis.....	.5iss	6|000
Liquoris potassii arsenitis.....	.5i	4|000
Tincturæ quassiae.....	.5vi	24|000
Elixiris aromatici q.s. ad.....	.5iii	90|000
Misce et fiat solutio.		
Sig.: Teaspoonful in water after meals.		

R.		
Tincturæ quassiae.....	.5vi	24|000
Liquoris acidi arsenosi.....	.5i	4|000
Tincturæ ferri chloridi.....	.5iii	12|000
Glycerini .....	.5iv	15|000
Aqua destillatae q.s. ad.....	.5iii	90|000

Misce et fiat solutio.

Sig.: Teaspoonful in water after meals.

R.		
Liquoris acidi arsenosi.....	.5iss	6|000
Syrupi ferri iodidi.....	.5vi	24|000
Tincturæ calumbæ.....	.5i	30|000
Aqua q.s. ad.....	.5iv	120|000

Misce et fiat solutio.

Sig.: Teaspoonful in water after meals.

R.		
Liquoris acidi arsenosi .....	.5i	4|000
Tincturæ ferri chloridi.....	.5iii	12|000
Tincturæ gentianæ compositæ.....	.5i	30|000
Aqua cinnamomi q.s. ad.....	.5iii	90|000

Misce et filtrat.

Sig.: Teaspoonful in water after meals.

Any of the solutions of arsenic can be dispensed with the bitter tinctures; the acid solution was selected to conform with the iron preparations. In the first prescription either the alkaline or neutral solution of arsenic may be used. The alkaline solution was selected because it renders the iron and ammonium citrate more soluble. Acid or neutral solutions are generally miscible with tinctures, but alkaline solutions are only miscible with those tinctures which do not contain alkaloids, the alkaline solution precipitating the alkaloid.

4. With an alkaline bitter stomachic. For example:

R.		
Liquoris potassii arsenitis.....	.5i	4|000
Sodii bicarbonatis.....	.5iv	15|000
Tincturæ hydrastis.....	.5vi	24|000
Aqua cinnamomi q.s. ad.....	.5iii	90|000
Misce et fiat solutio.		
Sig.: Teaspoonful in water after meals.		

5. With nerve sedatives, as bromids, gelsemium, hyoscyamus, cannabis indica, valerian. For example:

R.		
Liquoris potassii arsenitis.....	.5i	4|000
Sodii bromidi.....	.5ii	8|000
Syrupi aurantii.....	.5i	30|000
Aqua cinnamomi q.s. ad.....	.5iii	90|000
Misce et fiat solutio.		
Teaspoonful as required.		

R.		
Liquoris sodii arsenatis.....	.5i	4|000
Ferri et strychninæ citratis.....	.5iss	6|00
Tincturæ gelsemii.....	.5iv	15|00
Aqua q.s. ad.....	.5iv	120|000
Misce et fiat solutio.		

Sig.: Teaspoonful in water every three or four hours or after meals.

6. With hydrargyrum. Both the arsenate and the arsenite of mercury are insoluble; therefore care should be used in dispensing mercury preparations with the solutions of arsenic. This is however, permissible where an excess of potas-

sium iodid is used, thus converting the mercury into the potassium mercuric iodid, which is hard to precipitate. Whenever it is possible to use arsenic in its basic condition, such as arsenic iodidum, no incompatibility results as in liquor arseni et hydrargyri iodidi (official solution). For example:

R.			
Liquoris acidi arsenosi.....	5i	4|000	
Potassii iodidi	3i	4|000	
Hydrargyri bichloridi.....	gr i	0|065	
Aqua q.s. ad.....	3iv	120|000	

Misce et fiat solutio.

Sig.: Teaspoonful in water after meals.

R.			
Liquoris arseni et hydrargyri iodidi.....	5ss	2|000	
Hydrargyri bichloridi.....	gr i	0|065	
Potassii iodidi.....	gr v	0|325	
Aqua q.s. ad.....	3iv	120|000	

Misce et fiat solutio.

Sig.: Teaspoonful in water after meals.

In both of the above prescriptions the mercury is changed into the potassium-mercuric iodide.

7. With salicylates and colchicum. For example:

R.			
Liquoris potassii arsenitis.....	5iss	6|000	
Sodii salicylati.....	3vi	24|00	
Glycerini	3vi	24|00	
Aqua menthae piperitae q.s. ad.....	3iv	120|000	

Misce et fiat solutio.

Sig.: Teaspoonful in water after meals.

In prescribing arsenic solutions with the salicylates or other organic salts the liquor potassii arsenitis should be used, as its alkaline condition aids the solubility of the salt.

R.			
Liquoris potassii arsenitis	3i	4|000	
Potassii iodidi	3ii	8|000	
Tincturæ colchici seminis	3ii	8|000	
Elixiris aromatici q.s. ad.....	3iii	90|000	

Misce et fiat solutio.

Sig.: Teaspoonful in water after meals.

8. With quinia. For example:

R.			
Liquoris acidi arsenosi.....	5i	4|000	
Tincturæ cinchonæ compositæ	3i	30|000	
Tincturæ nucis vomicae.....	3i	4|000	
Aqua cinnamomi q.s. ad.....	3ij	90|000	

Misce et fiat solutio.

Sig.: Teaspoonful in water after meals.

The acid solution prevents the precipitation of the quinin in the tincture of cinchona and the strychnin in the tincture of nux vomica.

R.			
Liquoris acidi arsenosi.....	5i	4|000	
Quininæ hydrochloridi.....	gr xv	1|000	
Tincturæ ferri chloridi.....	3ii	8|000	
Acidi hydrochlorici	mx	0|650	
Syrupi	3iss	45|000	
Aqua q.s. ad.....	3iii	90|000	

Misce et fiat solutio.

Sig.: Teaspoonful in water after meals.

The quinin is soluble in the acid solution.

9. With expectorants, as citrates, acetates, ippecac, ammonium carbonate, scilla, tolu, wild cherry, tar. For example:

R.			
Liquoris sodii arsenatis.....	5ss	2|000	
Potassii iodidi.....	3ii	8|000	
Vini ipecacuanhae	3vi	24|000	
Tincturæ hyoscyami.....	3iv	15|000	
Aqua chloroformi q.s. ad.....	3vi	180|000	

Misce et fiat solutio.

Sig.: Dessertspoonful every three or four hours.

R.			
Liquoris potassii arsenitis	5ss	2|000	
Potassii acetatis.....	3i	30|000	
Syrupi toluatus		1	
Syrupi picis liquidæ aa.....	3iss	45|000	
Aqua q.s. ad.....	3vi	180|000	

Misce et fiat solutio.

Sig.: Dessertspoonful every 3 or 4 hours.

10. With heart stimulants, as digitalis, nux vomica, strophanthus, ammonium carbonate, aromatic spirits of ammonia, caffeine. For example:

R.			
Liquoris potassii arsenitis.....	5ss	2|000	
Tincturæ nucis vomicae.....	3ii	8|000	
Ammonii carbonatis.....	3iss	6|000	
Elixiris aromatici q.s. ad.....	3vi	180|000	

Misce et fiat solutio.

Sig.: Dessertspoonful every two or three hours.

The alkaline solution and the ammonium carbonate will cause a precipitation of the alkaloid in the tincture, but it will be redissolved by the elixir.

R.			
Liquoris potassii arsenitis.....	5ss	2|000	
Spiritus ammonii aromatici.....	3iv	15|000	
Tincturæ digitalis.....	3iv	15|000	
Aqua camphora q.s. ad.....	3vi	180|000	

Misce et fiat solutio.

Sig.: Dessertspoonful every three or four hours.

In the above prescriptions an effort has been made to show how by careful prescribing the solutions of arsenic may be compatibly combined with other drugs to meet the various therapeutic indications in practice. It is understood that the dosage of the various drugs in the prescriptions, as in all prescriptions, may be varied to meet existing conditions, care being taken that such variations of dosage do not produce incompatibilities.

NATIONAL FORMULARY LIQUORS.

Liquor potassii arsenitis et bromidi: One per cent. of potassium arsenite; about 5 per cent. of potassium bromid.

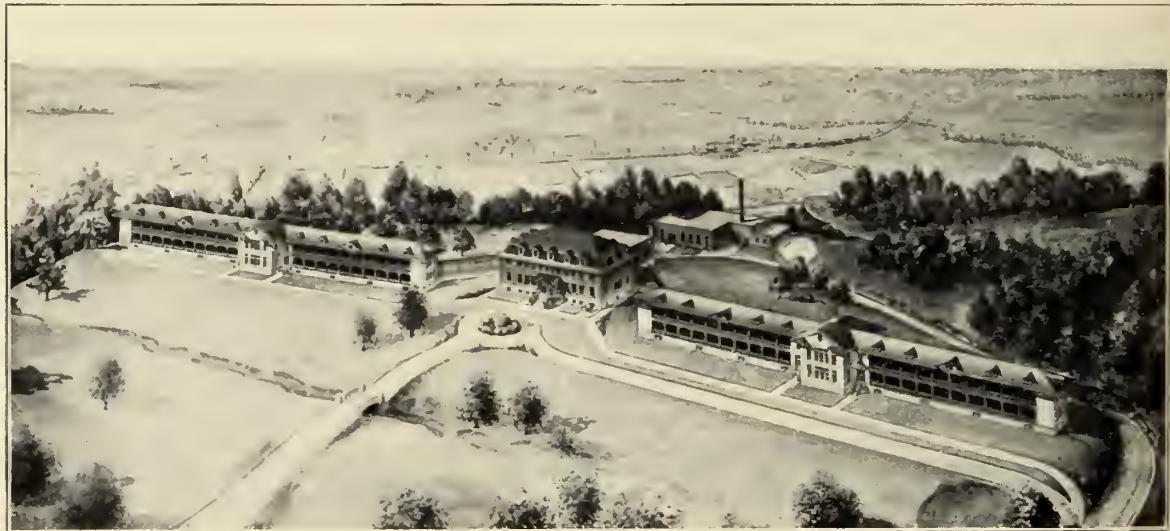
Liquor sodii arsenatis, Pearson: One-tenth of one per cent. of sodium arsenate.

Liquor auri et arseni bromidi: One per cent. of arsenic bromid; 0.5 per cent. of gold tribromid.

THE STATE TUBERCULOSIS HOSPITAL.

The accompanying picture is a bird's eye perspective of the tuberculosis hospital now under course of construction by the state of Indiana on the state site near Rockville. The site, as can be seen by the picture, is on hills on the east side of Raccoon Valley, about three miles east of Rockville. The state owns 504 acres, of which 125 acres is bottom land. The balance of the site is rolling and well wooded. The buildings are being built along the bluff, from which there is a beautiful view across the valley. The site cost the state \$24,000, which is approximately \$50 an acre, besides which the citizens of Rockville and the owners of the land donated \$1,900 and the free right of way for a railroad switch.

sleeping rooms for nurses, superintendent, doctors and all employés, and the power-house. In addition to this the commissioners have contracted for a complete water system of the pneumatic type, a complete heating system, electric light, sewer systems, and a complete plumbing equipment. The commissioners are also holding in reserve a sum sufficient to equip and furnish these buildings. However, these furnishings will not be bought at the present time, as the last Legislature did not make any appropriation for operating the hospital. Therefore, much to the disappointment and regret of the commissioners and those interested in the undertaking, the hospital can not be put in operation until the next Legislature meets and appropriates sufficient



Indiana State Tuberculosis Hospital, Rockville, Indiana.

The gravel road from Indianapolis to Rockville goes through the site. The Central Indiana and the Vandalia Railroad both go through the valley within one mile of the site. The very best water has been secured from artesian wells in large quantities.

The commissioners made a request to the last Legislature for \$300,000, and that amount would have been sufficient to have built a complete hospital for 260 patients. However, the Legislature only appropriated \$130,000; therefore the commissioners had to condense their original plans and do the best they could with the small amount available.

The buildings now under course of construction comprise two large ward buildings, with "out-door sleepers," with a capacity of sixty patients each, an administration building, which includes the dining hall and kitchen and the

funds. However, the buildings will be completed and will have to stand idle nearly a year.

All the buildings have a south exposure, which insures the greatest amount of sunshine. The ward buildings are two stories high and are only one room deep. Therefore, each room has a south exposure and opens on to a sleeping porch. The corridor connecting the rooms is arranged so that it will be open in pleasant weather and closed in severe weather. The wards are of two kinds. The first story of wards have large double doors opening on to the porches, through which a bed can be pushed out on to the porch at night and pulled in the room in the day time. The second stories are built on the plan that is commonly called "in and out sleepers;" that is, the beds are built in an alcove, between the dressing room and the porch. This alcove is closed in by glazed sash, which slide up and down like an or-

dinary window. When the outside sash is closed and the inside sash is opened the patient can step right out of the bed into the room. When this is reversed, and the inside sash is closed and the outside sash is opened, the patient is outdoors. These sashes can be operated very easily by the patient. The sexes are to be separated, each having a separate ward building. Each ward building is to be connected with the administration building and dining hall by an enclosed corridor, which will be opened in pleasant weather. This allows the patients in bad weather to go back and forth to their meals without being exposed to the rain, and at the same time getting the benefit of the fresh air. In the center of each building is a sun parlor with glass on three sides and a large open grate, a fire place, on the fourth side. In the rear of the sun parlor are a noon room, dispensary and diet kitchen. The dressing rooms and sun parlor are heated by steam heat. There is a tunnel running from the ward buildings to the administration building; all these are connected to the power house by means of conduits; through these conduits and these tunnels all service pipes are run, which provide for water, both hot and cold, and steam heat.

Each ward building is equipped with ample toilet arrangements, with enclosed tubs and shower baths.

The dining hall is a large room, well lighted and ventilated with high ceilings, with small tables, each of which will seat eight people. The dining hall is accessible practically from the enclosed corridors.

The power-house is located in the rear, and at a considerably lower level than the rest of the buildings, and is practically out of sight from the wards.

It is the intention to locate the tents and shacks at the east and west ends of the ward buildings, and at right angles therewith, making two sides of what will eventually be a square.

The buildings were designed by Messrs. Brubaker and Stern, architects, Indianapolis, Ind. The commission is composed of Dr. Henry Moore, Irvington; J. U. Babcock, Topeka; Isaac W. Strouse, Rockville; William S. Holman, Aurora; Benjamin F. Bennett, Greensburg.

FRANK W. FOXWORTHY.

BOOK REVIEWS

ESSENTIALS OF LABORATORY DIAGNOSIS. Designed for students and practitioners. By Francis Ashley Faught, M.D., Director of the Laboratory of the Department of Clinical Medicine, Medico-Chirurgical

College, etc., etc., Philadelphia, Pa. F. A. Davis Company, publishers, 1909.

This manual gives a comprehensive and concise account of practical laboratory methods commonly employed by the general practitioner. Each method is described in such a clear manner, devoid of all superfluous detail, that the book should prove of great value to those who desire a short and complete laboratory manual. The work of its class is in every respect a credit to the author.

THE POPES AND SCIENCE. The Story of the Papal Relations to Science from the Middle Ages Down to the Nineteenth Century. By James J. Walsh, M.D., Ph.D., LL.D. 400 pp. Price, \$2.00 net; postage 15 cents extra. Fordham University Press, New York City. City office, 110 W. Seventy-fourth street.

In this most estimable and highly interesting work,

Dr. Walsh has endeavored to enlighten those interested in the relation of the Papal heads to the advancement of science. Heretofore there have been many opinions upon the subject accepted without due investigation of the source or its authenticity. The author seems to have established his arguments beyond question in bringing out some of the famous bulls so completely. The book will prove both an interesting and valuable addition to our literature.

DISEASES OF THE DIGESTIVE CANAL. By Dr. Paul Cohnheim, Specialist in Diseases of the Stomach and Intestines in Berlin. From the second German edition. Edited and translated by Dudley Fulton, M.D., Lecturer on Medicine, University of Southern California, Los Angeles. J. B. Lippincott Company, Philadelphia and London. Cloth, pp. 373.

In this second edition the general plan and arrangement of the work have not been changed; merely an addition of some of the newer methods of diagnosis and treatment has been made.

One cannot but feel that the original author has been fortunate in permitting an English translation of his work to have been issued, particularly when that portion relating to affections of the gall-bladder is read. The world owes its knowledge of gall-bladder disease to the English and American profession very largely, and this is once more proven by the very scant treatment that would have been accorded the subject had it not been for the translator, whose bracketed remarks are by far the most valuable part of the section.

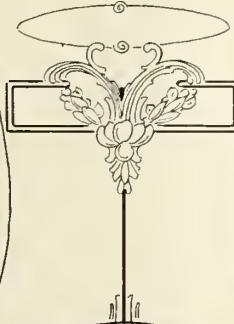
The attempt of the author to differentiate appendicitis from typhlitis by the relief afforded the former by the ice-bag and the latter by hot application, when he has omitted entirely one of the most important physical findings in appendicitis, viz., rigidity at McBurney's point, would hardly meet the approval of a diagnostician who had had the opportunity of seeing a large number of such bellies opened.

Likewise the multiplicity of proprietary remedies recommended in the treatment of a number of the lesions considered is not conducive to a firm belief that the author has found any one of them particularly efficient.

Much of the volume is given over to clinical data, however, which should prove of some value to a further knowledge of the subject.



DR. GEORGE D. KAHLO, FRENCH LICK, IND.
President Indiana State Medical Association, 1909.

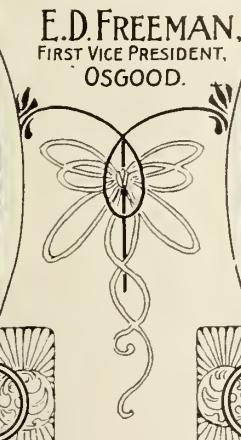


CHARLES H. MCCULLY,
SECOND VICE PRESIDENT,
LOGANSPORT

CHARLES CHITTICK,
THIRD VICE PRESIDENT
FRANKFORT



D. W. STEVENSON,
TREASURER
RICHMOND



F. C. HEATH,
SECRETARY
INDIANAPOLIS.

THE TERRE HAUTE SESSION.

After an absence of twelve years the Indiana State Medical Association returns to Terre Haute. During this interim the association has grown very considerably in size and importance, but Terre Haute has increased, and is now prepared and anxious to entertain the largest session in the history of the association. When the association last met in Terre Haute in 1897 the town had a population of 30,000 and the attendance at that session was about 300. A city of 75,000 is ready to greet a thousand guests and demonstrate to them that there is nothing slow about the "Pittsburg of the West."

The question will naturally arise in the minds of the association members who read this number of *THE JOURNAL*. Why should I leave my business for two days this fall and attend this session? Many reasons may be given. Every physician owes to himself at least once a year rest. No physician can be counted as progressive and alive to his best interests if he does not keep in touch with medical advances, and there is no better way in which to broaden his sphere of knowledge than by attendance upon live and progressive medical societies. The State Association is the one big and progressive organization in which Indiana physicians should be particularly interested. Its sessions are the means of extending acquaintances and friendships so necessary for the broadening of the social sphere of the doctor. This year, for the first time in its history, the association holds its annual session in the fall. The time is especially appropriate, as there are no other large medical associations which hold meetings at this season of the year to detract from the session of the State Association. Then there is the added advantage of cool weather at a most delightful season of the year when Nature in Indiana is at its best.

HISTORIC PLACES.

The city of Terre Haute is an attraction in itself. Being one of the earliest settled parts of the state, its very name is a reminder of the fact that the French voyageurs were the pioneers in Indiana. On a high bank at the bend of the Wabash, about two miles north of the city, stands Fort Harrison, commanding a magnificent view of its environments. This place is preserved for future generations through the generosity of one of our citizens, who has converted it into a beau-

tiful park, and has used the original logs from the old block house at the fort in rebuilding the residence. Here it was in 1811 that General William Henry Harrison, and later Zachariah Taylor, defended the garrison against the sieges of the redskins, whose murderous war cries more than once rang over this historic spot. It was also near here that George Rogers Clark sank and captured the boats of the British, and here was fought the first naval battle of the northwest, which gave five great states to the American Union.



Dr. Walker Schell, Terre Haute, Chairman of Committee on Arrangements.

EDUCATIONAL INSTITUTIONS.

Five miles west on the Paris Interurban is located St. Mary's of the Woods, the great Catholic school for young ladies and the headquarters of the nuns of the Order of Providence, who teach in all the great centers of the United States. Here are buried the original five French sisters who came to this country to found this order. This institution of learning from an humble beginning in 1841 now has imposing buildings costing over \$1,000,000 situated in a splendid natural park. To this retreat come the

1,000 Sisters of Providence once a year from all over the United States.

The Indiana State Normal School, located at Terre Haute, is too well known to require comment. Its students number 3,500, with a substantial increase each year. The \$150,000 normal library building just completed is a credit to the state. It houses 60,000 volumes and is especially rich in pedagogy and psychology.

The Rose Polytechnic Institute, located at Terre Haute, ranks with the best technical

the Vigo County Medical Society has its library and the current files of all the important medical journals.

CLUBS.

Near the Wabash avenue bridge is the motor boat club. Motor boating is fast becoming the public sport, and already there are 150 speedy motor boats on the river. East of the city is the famous four-cornered race track, where many of the world's turf records have been lowered.



St. Anthony's Hospital, Terre Haute.

schools of the country. Its graduates are found the world over filling the highest positions. This, with the Rose Dispensary and the Rose Orphans' Home, are monuments to the philanthropy of Chauncey Rose.

The Elmerine Fairbanks Public Library was erected at a cost of \$100,000 by the millionaire Crawford Fairbanks, of Terre Haute, as a memorial to his mother. It contains 30,000 volumes and all the equipment of a modern library. Of particular interest is the medical alcove, where

The new Elks' Club House, with its luxurious appointments, is excelled by none in the state, as it represents an outlay of \$125,000.

The young business men's club on Ohio street numbers among its members many of the Terre Haute physicians. Through the courtesy of the directors of the club visiting physicians wearing the official badge will be allowed the freedom of the building with all its social conveniences.

Adjoining the business men's club is the Y. M. C. A. building, also very well equipped, to which

visitors to the Terre Haute session are welcomed at any time.

The Phoenix Club has a magnificent new home for social purposes, owned by the Jewish people of the city.

HOSPITALS.

The two hospitals of Terre Haute will be open to the visiting physicians. St. Anthony's has a staff of fifteen and cared for 1,342 cases last year, and the Union Hospital, with a staff of eighteen, cared for 940 cases last year. Clinics

but soon outgrew this original purpose and became a public institution. It has been liberally supported by donations from some of the enterprising citizens.

The Rose Dispensary is one of the charities provided by the late Chauncey Rose. It is designed to furnish medicine and aid to the worthy poor outside of hospitals. The offices of many of the local doctors will be found in the Rose Dispensary building, Seventh and Cherry streets; the eight-story Trust building, at Seventh and Wabash, and in the Swope block, Seventh and



Rose Polytechnic Institute, Terre Haute.

will be held at both places. St. Anthony's was founded in 1882 by the Sisters of St. Francis. This hospital has been aided by the generosity of one of our wealthy citizens. Within the past year the hospital has built a large addition, which contains the finest suite of operating rooms in the West. The floors and walls of the entire suite and the halls connecting them are of glass. The Union Hospital was organized in 1892 by the late Drs. B. F. Swafford and L. J. Weinstein and a few other physicians for their private cases,

Ohio streets. The "Seeing Terre Haute Automobile" will furnish a spin over the thirty miles of boulevards and paved streets and a view of the city parks, private residences, churches, and school buildings.

PLACE AND TIME OF MEETINGS.

All meetings will be held in the new Knights of Pythias Temple at Eighth and Walnut streets, which may be reached from the center of the city (Seventh and Wabash) by walking one square

east and two south. Upon arriving in the city members of the association are requested to go to the place of meeting at once and register at the desk on the first floor, where badges and tickets to all entertainments will be furnished. The Commercial Exhibit will be on this floor, and, as much of the space has already been taken, it is expected that this will be an interesting feature of the session. The hours are from 8 a. m. to 8 p. m., Wednesday, Thursday and Friday. The meeting of county society officers, the meetings of the house of delegates and council, on Wednesday night, and the meetings of the medical and surgical sections on Thursday and Friday, will be held in the two lodge halls on the

The Plaza, capacity 75, rates 50 cents to \$1.50; Great Northern, capacity 40, rates 50 cents to \$1; St. Nicholas, capacity 30, rates 50 cents to \$1; Stag Hotel, capacity 150, rates 50 cents to \$1. Besides these there are several smaller hotels on Ninth street leading from the Union Station. For the benefit of those who have had unfortunate experiences in being charged extortionate rates for hotel accommodations the committee on arrangements of the association wish to announce that the hotels of Terre Haute will maintain their regular rates during the session of the association and no excessive charges will be allowed. The committee has provided a list of rooms in private families for those who wish



Union Hospital, Terre Haute.

third floor. The general meetings will be held in the ballroom on the second or main floor. This room will comfortably seat 500 people. The official photograph of the association will be taken in front of the building at 1 p. m. on Thursday.

HOTELS.

Terre Haute offers hotel accommodations to suit every taste and purse. Among the more prominent hotels may be named the following: American Plan—Terre Haute House, capacity 350, rates \$2.50 to \$4; Filbeck Hotel, capacity 150, rates \$2 to \$2.50; New National Hotel, capacity 50, rates \$1.50 to \$2. European Plan—

to avail themselves of such accommodations. Information concerning this list may be obtained at the registration desk. Since October is one of the busiest months of the year for hotels, it will be well for those intending to attend the Terre Haute session to write the hotels and engage accommodations in advance.

ENTERTAINMENTS.

The success of State Association sessions may be measured by the sociability. It will be the aim of the Terre Haute Medical Association to make the coming session of the Indiana State Medical Association particularly notable in this respect.

As an inducement for the members to come early the "big smoke" will be given on Wednesday night. The vaudeville numbers will begin about 10 p. m. Throughout the evening a buffet luncheon will be served. This is to be an informal affair. Thursday night, after the evening session, the members and ladies are to be favored with a double headliner medical vaudeville at the Varieties Theater. Thursday and Friday, from 7:30 to 9 a. m., just before the morning meetings, medical and surgical clinics are to be given at the two hospitals. This is a new feature, and it is hoped that it will be sufficiently interesting

TICKETS FOR ALL ENTERTAINMENTS FOR MEMBERS AND LADIES MUST BE OBTAINED AT THE TIME OF REGISTRATION. THESE TICKETS WILL BEAR THE OWNER'S NAME AND ARE NOT TRANSFERABLE.

RAILROADS.

It is unnecessary to publish railroad timetables, since eighty-two passenger trains in and out each day, with hourly service on four interurban lines north, east, south and west make it possible for members to come and go at their



Elks Building, Terre Haute.

and attractive to compensate for the early rising required. There will be surgical operations, medical cases exhibited in the wards, and all kinds of the latest laboratory work demonstrated.

The wives of the local doctors have announced a most delightful program for the visiting ladies. Thursday morning a trolley ride to St. Mary's of the Woods will be given, with a trip through the magnificent buildings and chapel of this famous retreat. Thursday night a theater party for the doctors and their families. Friday morning a boat ride up the Wabash to Fort Harrison and return.

convenience. Members of the reception committee will meet all principal trains on Wednesday afternoon and Thursday morning. Members of this committee may be identified by the official badges.

The members of the Vigo County Medical Society desire to offer a cordial welcome to each and every member of the State Association to Terre Haute at the time of the annual session, October 6, 7 and 8. The scientific program needs no words of praise, for it gives every indication of being of exceptional quality. We are fortunate

in being permitted to have as our honored guest Dr. Joseph Collins, of New York City, who will deliver one of the principal addresses of the session. The scientific treat, the social diversions, the rest from active professional work, and the privilege of being in Terre Haute is sufficient inducement to warrant any member of the association in being with us October 7 and 8.

COMMITTEE ON ARRANGEMENTS.

WALKER SCHELL, Chairman: M. A. BOOR, J. C. BOHN, C. N. COOMBS, J. R. YUNG, O. R. SPIGLER, F. H. JETT, J. H. WEINSTEIN.

3. Points in the Analysis of Psychotherapy.

F. F. Hutchins, Indianapolis.
Leaders in discussion. E. H. Lindley, Bloomington,
J. B. Berteling, South Bend, and F. R. Charlton,
Indianapolis.

FIRST AFTERNOON. 2:30 to 5:30.

MEDICAL SECTION.

1. Malaria—Aestivo Autumnal Fever.

G. D. Marshall, Kokomo.
Leaders in discussion. N. D. Brayton and S. E.
Earp, Indianapolis, and W. H. Stemm, North Ver-
non.

2. Value of Leucocyte Count. Analysis of 300 Blood
Counts. B. W. Rhamy, Ft. Wayne.

St. Mary's of The Woods, Terre Haute.

OFFICIAL PROGRAM.

Annual Session, Terre Haute, Ind., Oct. 7 and 8, 1909.

FIRST MORNING. GENERAL SESSION, 9:30-12:30.

1. Symposium on Cardio-Vascular Diseases.

1. Anatomical Considerations with Demonstrations. B. D. Myers, Bloomington.
 2. Demonstrations of Action of Heart Valves. W. J. Mönkhau, Bloomington.
 3. Clinical Cases Showing Types of Myocardial Lesions. A. C. Kimberlin, Indianapolis.
 4. Exhibition of Specimens Showing Various Heart Lesions. R. H. Ritter, Indianapolis.
- Leaders in discussion. C. S. Bond, Richmond, and L. P. Drayer, Ft. Wayne.

2. The Psychic Element in Disease.

F. B. Wynn, Indianapolis.

Leaders in discussion. H. R. Alburger, Bloomington, H. H. Thompson, Noblesville, B. P. Weaver, Ft. Wayne.

3. Nature of Insanity. Geo. Rowland, Covington.

4. Legal Responsibility of the Insane. A. E. Sterne, Indianapolis.
Leaders in discussion. E. C. Reyer and C. E. Cotttingham, Indianapolis, S. E. Smith, Richmond, and F. W. Terflinger, Logansport.

5. Home Treatment of Tuberculosis. J. C. Blossom, Richmond.

Leaders in discussion. J. N. Hurty, Indianapolis, F. A. Tucker, Noblesville, and Charles Wyeth, Terre Haute.

SURGICAL SECTION.

1. Foundations of Specialism.

Stanley Coulter, Lafayette.

- Leaders in discussion, J. F. Barnhill, Indianapolis, G. F. Keiper, Lafayette, and A. E. Bulson, Jr., Ft. Wayne.
2. Results of Neglected Appendicitis. B. Van Sweringen, Ft. Wayne.
- Leaders in discussion, G. J. Cook and David Ross, Indianapolis, and C. A. Daugherty, South Bend.
3. Report of Ten Cases of Intracranial Syphilis with Comments. Charles F. Neu, Indianapolis.
4. Syphilis of Nervous System. Garrette Van Sweringen, Ft. Wayne.
- Leaders in discussion, R. Hessler, Logansport, W. N. Wishard, Indianapolis, and J. W. Hill, South Bend.
5. Ilio-Hypogastric Hyperesthesia. M. A. Austin, Anderson.
3. The Serum Treatment of Epidemic Cerebrospinal Meningitis. W. D. Illoskins, Indianapolis.
- Leaders in discussion, J. B. Fattie, Anderson, J. A. McDonald and Charles R. Sowder, Indianapolis.
4. Congenital Heart Disease, Case Report, Post Mortem and Specimen. L. T. Rawles, Ft. Wayne.
- Leaders in discussion, Allen Pierson, Spence, and W. T. S. Dodds, Indianapolis.
5. An Overlooked Factor in Immunity. W. J. Fernald, Frankfort.
- Leaders in discussion, T. C. Kennedy, Shelbyville, A. P. Buchman, Ft. Wayne, O. J. Gronendyke, New Castle, and W. W. Tucker, Greencastle.
6. Pneumonia and its Management. J. C. Carson, Valparaiso.
- Leaders in discussion, Allison Maxwell, Indianapolis, and Wm. E. Cravens, Bloomfield.



Knights of Pythias Building, Terre Haute, Where all the Meetings of the Next Session of the Indiana State Medical Association Will be Held.

- Leaders in discussion, A. M. Hayden, Evansville, and T. B. Eastman, Indianapolis.
6. Classifications and Pathology of Chronic Non-Tubercular Arthritis. J. V. Reed, Indianapolis.
- Leaders in discussion, J. H. Ford, Indianapolis, G. D. Miller, Logansport, and H. C. Sharp, Indianapolis.

SECOND DAY, OCTOBER 8, FROM 9:30 TO 12:30.

MEDICAL SECTION.

1. Hemoptysis. E. A. Crull, Ft. Wayne.
2. Treatment of Pulmonary Hemorrhage. Theodore Potter, Indianapolis.
- Leaders in discussion, G. T. McCoy, Columbus, F. A. Dorsey, Indianapolis, and T. C. Stunkard, Terre Haute.

SURGICAL SECTION.

1. Tumors of the Tongue. L. D. Brose, Evansville.
- Leaders in discussion, G. R. Green, Muncie and J. R. Eastman, Indianapolis.
2. Present Status of Indications for Use of Forceps. H. A. Duemling, Ft. Wayne.
- Leaders in discussion, A. S. Jaeger and E. E. Padgett, Indianapolis, E. J. McOscar, Ft. Wayne, and A. A. Washburn, Clinton.
3. Cesarian Section as a Means of Rapid Delivery in Eclampsia with Case. Walker Schell, Terre Haute.
- Leaders in discussion, O. G. Pfaff and H. O. Pantzer, Indianapolis, and W. A. Fankboner, Marion.
4. Two Unusual Injuries in Region of Shoulder Joint. P. F. Martin, Indianapolis.

Leaders in discussion, H. R. Allen and J. W. Sluss, Indianapolis, and J. H. Rubsam, Logansport.

5. Hemorrhoids, Etiology and Pathology.

C. C. Kimmel, Ft. Wayne.

Leaders in discussion, W. H. Gilbert, Evansville, A. B. Graham, Indianapolis, and J. H. Weinstein, Terre Haute.

SECOND AFTERNOON, GENERAL SESSION, 2 TO 5.

1. Surgical Dilatation of Stomach, Pathology, Etiology and Diagnosis. Edwin Walker, Evansville.

Treatment. E. D. Clark, Indianapolis.

Leaders in discussion, M. F. Porter, Ft. Wayne, and J. H. Oliver, Indianapolis.

2. Pancreatitis. Pathology, Etiology and Diagnosis.

G. W. McCaskey, Ft. Wayne.

Treatment. J. C. Sexton, Rushville.

Leaders in discussion, T. B. Noble and T. V. Keene, Indianapolis, and P. J. Barcus, Crawfordsville.

REPORT OF SECRETARY.

The total paid membership (up to Sept. 13, 1909) is 2,667, a gain of 23 over the total for 1908. Starke County Medical Society makes no report, while Crawford county society, which failed to report last year, returns to the fold again, making the number of societies 86, the same as before.

The method of issuing membership cards with numbers corresponding to number on the list of members kept in the secretary's office, with a duplicate sent to THE JOURNAL for a mailing list, while temporarily increasing the work of the secretary, has proved a satisfactory way of determining whether dues have been paid in disputed cases.

The stenographer this year will be paid according to the amount of work, as in the American Medical Association, instead of making a contract for a lump sum, the method heretofore pursued. Other bills for this meeting will be about as usual.

F. C. HEATH,

Secretary Indiana State Medical Association.

REPORT OF TREASURER.

In account with the Indiana State Medical Association:

DEBIT.

Jan. 23, 1909, to cash on hand.....	\$37.14
Feb. 2, 1909, to cash from secretary, dues collected	1,164.00
March 3, 1909, to cash from secretary, dues collected	1,190.00
April 2, 1909, to cash from secretary, dues collected	170.00
May 3, 1909, to cash from secretary, dues collected	64.00
June 2, 1909, to cash from secretary, dues collected	20.00
July 3, 1909, to cash from secretary, dues collected	34.00
Aug. 4, 1909, to cash from secretary, dues collected	14.00
Sept. 3, 1909, to cash from secretary, dues collected	8.00
Total	\$2,701.14

CREDIT.

Feb. 2, 1909, by cash to Dr. Brayton.....	\$100.00
Feb. 8, 1909, by cash to Dr. Bulson.....	100.00
Feb. 17, by cash to C. H. Romney, canvasser for association	18.00
Mar. 3, 1909, by cash to THE JOURNAL, 75 per cent. of dues.....	1,765.50
April 2, 1909, by cash to THE JOURNAL, 75 per cent. of dues.....	127.00
May 3, 1909, by cash to THE JOURNAL, 75 per cent. of dues.....	48.00
June 2, 1909, by cash to THE JOURNAL, 75 per cent. of dues.....	15.00
July 3, 1909, by cash to THE JOURNAL, 75 per cent. of dues.....	25.50
July 3, 1909, by cash to W. B. Sprague, canvasser for association.....	27.00
July 3, 1909, by cash to S. H. Addison, canvasser for association.....	19.00
Aug. 4, 1909, by cash to THE JOURNAL, 75 per cent. of dues.....	10.50
Sept. 3, 1909, by cash to THE JOURNAL, 75 per cent. of dues.....	6.00
Total	\$2,262.00
To balance on hand.....	439.14
Total	\$2,701.14

DAVID W. STEVENSON, Treasurer.

REPORTS OF COMMITTEES.

REPORT OF COMMITTEE ON STATE MEDICINE AND HYGIENE.

STATE MEDICINE.

The Sixty-sixth General Assembly of the State of Indiana passed several important acts relating to state medicine. Some of these are not purely medical, but are of importance to physicians.

The Health Law.—This law consists of amendments to the health law of 1891, bringing it up to date. It makes almost an entirely new law. All vague and indefinite terms defining the duties and powers of health authorities are repealed, and definite terms supplied. Under the old law it was a frequent experience to find authority missing when it was necessary to conduct sanitary work which was obviously required and which should be done by health authorities. The new law changes the name of State Health Officer to that of State Health Commissioner. He possesses all the powers of a constable at law in all matters relating to the public health throughout the state. He must be able-bodied, free from drug addiction, of good moral character, thoroughly informed in hygiene and sanitary science, and a graduate of a medical college recognized by the State Medical Board. He shall not practice medicine nor engage in any other business, but shall give his full time to the work. All employees of the State Board are to be employed by the State Health Commissioner, and the salaries fixed by him subject to confirmation by the board.

The salaries of health officers are fixed on a population basis. City health officers shall receive not less than 2 cents per annum per capita for each inhabitant served. County health commissioners shall receive not less than $1\frac{1}{2}$ cents per annum per capita for the persons served. Town health officers are on the same pay basis as city health officers. The title of County Health Officer is abolished and so is the county board of health. The county commissioners appoint the County Health Commissioner, and there their powers and duties end.

The County Health Commissioner carries the whole burden of the county health work, and pays his own bills upon sworn vouchers from the health appropriation made by the county council.

The law contains a clause which has attracted considerable attention, and which certainly is very broad and sweeping in the powers it gives to health boards, and reads as follows: "And it shall be unlawful for any person, firm, company or corporation to institute, permit or maintain any conditions whatever, which may transmit, generate or promote disease; and it shall be the duty of all health commissioners and all health officers, upon hearing in any way of the existence of said unlawful conditions, within their respective jurisdictions, to order their abatement, in writing, if demanded, and specifying particularly wherein said conditions may transmit disease, and naming the shortest reasonable time for abatement. Upon refusal or neglect of any person, firm, company or corporation to obey said order, then the district prosecutor of the district wherein the offense occurs, upon receiving the information from said health commissioners or health officers, shall institute proceedings in the courts for enforcement."

Another provision is to the effect that health officers hereafter appointed shall pass an examination in hygiene and sanitary science before the State Board of Health, and by passing the examination they become eligible, but it is provided that those who have had recent experience in public health work may be appointed without a certificate of eligibility.

Sanitation of Food-Producing Establishments Law.—This law prescribes in minute detail sanitary requirements of food-producing establishments. Among these requirements are cement, tile, or tight wooden floors, abundance of light, thorough ventilation, protection against flies, good drainage, sanitary facilities for employes and thorough cleanliness everywhere. The enforcement of this law devolves upon the State Board of Health, which board is to be commended for having proposed and secured its passage. It is now well recognized that the adulteration of foods with injurious substances rarely, if ever, exists. When adulterations do exist, it is with non-injurious substances such as water in butter and milk or cornmeal in sausage. It, therefore, is true that the future pure food work will consist mostly in looking after the sanitation of food producing establishments.

Maternity Hospitals, Baby Farming.—This law requires that maternity hospitals shall not be conducted except under the supervision and with a license from the State Board of Charities. The terms of the law are exact and embrace all care of women during pregnancy and all illegitimate children not related by marriage or blood to all persons who furnish such care. The license given by the Board of Charities shall not be for more than one year, and shall limit the number of women or children received or cared for by the person conducting the hospital. Licensed establishments shall be visited and inspected at least once a year, and their manner of conducting business closely controlled. City and county boards of health are also required to visit and inspect these institutions at least once a year. The Board of State Charities is empowered to prescribe regulations and rules for conducting such places, and license may be revoked for disobedience to said rules. Admittance to maternity hospitals cannot be secured except the woman makes a sworn statement giving her name and residence and the name and resi-

dence of the father of the child, a report of which must be sent to the State Board of Charities.

Records of all births, all deaths and all adoptions shall be carefully kept. The expenses of confinement in a maternity hospital shall be paid by the county in which the woman has a settlement if not otherwise paid, and her child, if a public charge, shall be returned to such county. The penalty for violation of this act is a fine of not more than \$300 or imprisonment for one year, or both. One thousand five hundred dollars were appropriated to enforce the act.

Hospitals in Cities.—This law authorizes all cities with less than 20,000 inhabitants to levy and collect a special hospital tax of from 2 to 5 cents on each \$100 which may be paid at the same time and of which payment will be enforced by the same penalties as other taxes. The money so collected is to be kept separate as a fund for a city hospital.

Indiana University.—This law gives Indiana University authority to accept the property of the medical college of Indiana and to conduct a medical school in Marion county. The law consists of only two sections. The second section is simply an emergency. The law provides that "premedical or other collegiate work done in any college or university of Indiana which is recommended by the State Board of Education as a standard college or university shall be received and credited in the Indiana School of Medicine upon the same conditions as work of the same kind, grade and amount done in the department of liberal arts of Indiana University."

Nurses' School and Hospital.—This law authorizes the incorporation of charity hospitals as schools for nurses. Power is given to acquire, own, equip and carry on charity hospitals, medical or surgical, or both, wherein sick, deformed and injured persons shall be treated and nursed, and during treatment and nursing will be boarded and cared for all without the payment of any fee or compensation, and in connection with the hospital or hospitals to carry on a school for nurses. One officer of such institutions must be a licensed physician, but the corporation is given power to do almost anything within the purpose of its organization. It may decide whom it will receive, and whom it will not receive as patients, what kinds of diseases, deformities and injuries it will not treat, and for what length of time it will treat and care for any patient.

Medical School Inspection.—A very comprehensive bill concerning school sanitation and medical inspection of school children was introduced by the State Board of Health, but for political reasons was defeated. It passed the Senate and House to third reading when the political complications arose. This bill was approved by many prominent physicians and by many prominent educators. It simply required that schoolhouses hereafter built should be sanitary and kept so, and also that within two years all school authorities would be compelled to make medical inspection of the pupils. Upon failure of this bill to pass, another one was introduced applying to Indianapolis only, and it passed. It provides for medical inspection of the children by physicians appointed by the City Board of Health under regulations prescribed by the said board of health. The board may "prohibit the presence in or about any school of any pupil, teacher or other employee or person whose health is such that his presence would in the board's opinion be injurious or dangerous to himself or others in the school." The board is also empowered to employ district nurses with

visitorial powers. The civil city is to bear the expense and may levy a tax of one-half cent on each one hundred dollars submitted.

It is greatly to be hoped that the next legislature will pass a just and comprehensive medical inspection law, applying to the entire state.

Physician's License.—Under the medical law the state medical board was authorized under certain conditions to revoke the licenses of physicians, but it had no authority to restore them. An amendment was therefore introduced and passed which gives the board power to "permit the practice of medicine, surgery and obstetrics as though said license had not been revoked upon a satisfactory showing by such physician or surgeon." This seems to be a just provision, for it

fined in the insane prison shall be counted as a part of his imprisonment.

Stream Pollution.—The intent and purpose of this law is to conserve the surface water supply of this state, and to prevent the pollution of lakes and streams. The enforcement of this act devolves upon the State Board of Health. The law provides that on the complaint of a local board of health, city council or township trustee, and after notice and a hearing any city, town, village, corporation, person or firm may be compelled to refrain from discharging sewage, waste or other deleterious matter into any stream, spring, lake or pond or any source of public water supply. The board may recommend such treatment of the waste discharged by the offender as will render the



Indiana State Normal School.

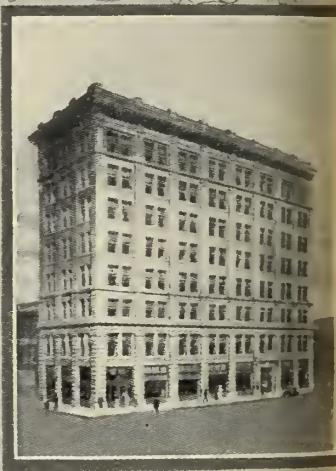
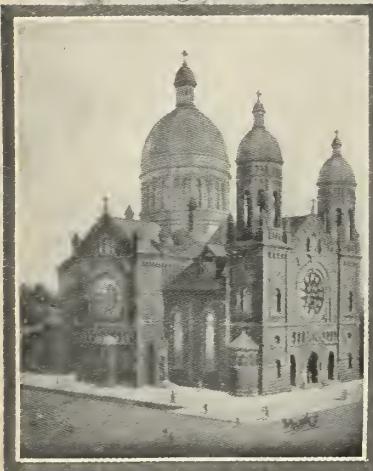
is not hard to imagine an instance where the revocation of a license might afterwards be found to be unjust or the person sufficiently punished.

Insane Criminals.—This law provides for establishing an Indiana Hospital for Insane Criminals at Michigan City upon the state prison grounds. The institution is to be under the management of the board of trustees and warden of the state prison. The method of procedure for examination to determine whether or not insanity exists is provided, and the method may be used on persons at either the state prison or the reformatory at Jeffersonville. Authority is given to restore back to prison an insane prisoner whose sanity is restored before his time expires. The time he is con-

noxious matter so being passed into the water innocuous and harmless. Reasonable time must be allowed to adopt, construct, and put in use the appliances recommended by the board. The law does not apply to the Ohio, Wabash, St. Joseph and other rivers which flow from another state into Indiana, so long as the unpurified sewage of cities, towns, villages, corporations, persons or firms of such other states is permitted by law to be discharged into such streams upstream from such Indiana city, town, village or other municipality.

The State Board of Health is empowered to compel any water works company, person or city or town operating a water works plant to make such changes as it may recommend as respects the water supply to the

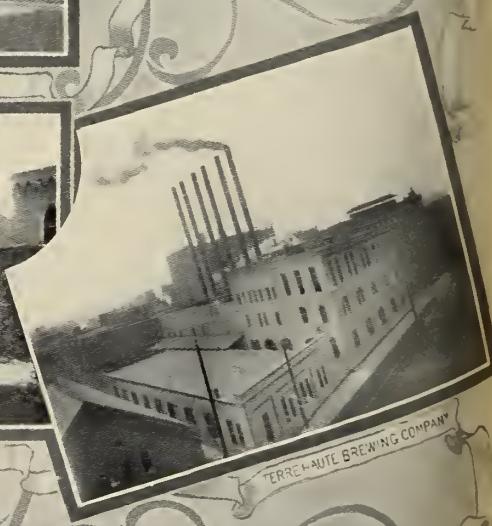
VIEWS IN TERRE HAUTE



EMELINE FAIRBANKS MEMORIAL LIBRARY



TERRE HAUTE WATER WORKS



TERRE HAUTE BREWING COMPANY

TERRE HAUTE SCHOOL BUILDING

satisfaction of the said board. Such action must be taken on complaint of the local board of health. If the order is given to make such changes, a superintendent approved by the State Board of Health must be appointed.

An appeal is provided for to an expert board composed of sanitary water engineers, one member to be selected by the State Board of Health, one by the parties concerned, and one by the two appointees. The decision of this board is not final, but may be appealed from to the county court.

State Veterinarian.—This law increases the appropriation from \$3,000 to \$5,000. Previous to its passage \$25 was the limit which could be paid for damages for the slaughter of a single animal. Now provision is made to determine the value of an animal slaughtered. To the causes for which animals can be slaughtered is added "to protect the health of the public by the slaughter of animals infected with tuberculosis." The veterinarian or his deputies may require dogs to be muzzled in any locality for any length of time. Cattle shall be tested for tuberculosis, and the veterinarian may determine what shall be done with infected animals or whether they shall be treated with a hope of curing them or shall be destroyed.

Tuberculosis Hospital.—The law establishing a State Tuberculosis Hospital was passed by the Sixty-fifth General Assembly in 1907. An appropriation of \$30,000 was given for the purchase of a site, but the building of the institution was left for a succeeding assembly. The Sixty-sixth General Assembly in 1909 appropriated \$135,000 for buildings and equipment, but nothing was appropriated for support. The buildings are now in process of erection, but must stand idle until another legislature provides for maintenance. This is an unfortunate state of affairs, and is the result of the reluctance of legislators to take the advice of disinterested experts. The bill providing for appropriations for the tuberculosis hospital, which was presented by the State Tuberculosis Commission, was most carefully considered and covered every necessary provision. The legislature amended the law so as to bring about the present loss and delay.

HYGIENE.

During the year passed great activity has prevailed in administrative hygiene in Indiana. The health officers and health boards of Indianapolis, Fort Wayne, Evansville, Lafayette, Richmond and South Bend have been unusually active. In all these cities and other cities, too, the boards of health have taken up the important subject of pure milk supply. In Indianapolis and Fort Wayne extra activity has prevailed. Under the intelligent and energetic leadership of Dr. Buehler in Indianapolis and Dr. Bruggeman in Fort Wayne, the milk supply of these cities has been greatly improved, with the consequent result of reducing the infant morbidity and mortality rates.

The Indianapolis Board of Health is now provided with two expert milk inspectors who give the greater part of their time to the work. The cleanliness of dairies and the clean handling of milk is looked after very closely. Numerous prosecutions have been brought on account of the existence of insanitary conditions. In Evansville, Dr. Welborn; in Richmond, Dr. Bond, and in South Bend, Dr. McNamara have given a great deal of time and attention to providing pure, clean milk for their communities.

In Fort Wayne, the dairyman's association began suit to enjoin the city from enforcing the provisions of

the city milk ordinance. The court ruled that all sections were valid except the penalty clause, and the ordinance was then amended to fit the ruling of the court, giving power to the board of health to refuse to license any dairies whose cattle had not been inspected or whose dairy was insanitary. Under this amended ordinance the Fort Wayne authorities tested 1,264 cows in 111 herds; 1,151 passed and 120, almost ten per cent., were condemned. Fifty-four condemned cattle were killed and the remaining 66 were placed in quarantine and many subsequently killed. The reacting cows were all found in nineteen herds and 95 per cent. of the reactors were in seven herds. So the majority of the herds were found free from tuberculosis. At present the milk supply of Fort Wayne is furnished from tuberculin-tested cattle or it is pasteurized, with the exception that some milk is admitted from small dairies which have only one or two cows, and the animals of these places will be tested in time.

The crusade against the fly has been vigorous in Indiana. Most of the cities and a few towns have taken up the subject. The State Board of Health issued an illustrated placard showing how flies carry disease and filth, and illustrating their danger. Numerous articles have been published in the newspapers and circulars freely distributed. The State Board prepared and sent out to all cities and towns a special anti-fly ordinance, and the same has been passed in many places. It is to be regretted, however, that the authorities of several especially dirty and malodorous towns rejected the ordinance in an uncomplimentary manner.

The last year marks an era in preventive medicine in the United States, for it may now be said that yellow fever is absolutely mastered, and it has been demonstrated that hygiene is building the Panama canal. Hygiene is almost the first consideration in the construction of all new buildings, and the state and municipal governments in all public works consult the science of hygiene.

Professor Irving Fisher, of Yale University, a member of the National Conservation Commission, has issued a bulletin entitled, "Report on National Vitality. Its Wastes and Conservation." This is a remarkable document of 129 pages, in which is shown that it is possible to extend the duration of life fifteen years. In the United States the death rate is 16.5 per thousand, in France 20, in India 42. In the different cities of the United States it varies from 14 in Michigan and Indiana to 18 in New York. The death rates of cities are uniformly higher than the death rate of the country, and the larger the city the higher the death rate. Death rates have been decreased during several centuries. In London, where it is now 15, it was 40 to 50 during the eighteenth and seventeenth centuries, and in 1680 it reached as high as 80. In Havana, after the American occupation, the death rate fell from 50 to 20. The effect of the practical application of hygiene is also found in the reduction of the infant mortality, although the death rate of infants is still undoubtedly very high. Statistics say that during the first thirty years the death rate has decreased, but that beyond fifty it has remained almost stationary.

Hygiene has long offered complete immunity from smallpox, the difficulty being to induce the people to accept the method, namely, vaccination. It is also in complete control of cholera, and, as before said, of yellow fever. The bubonic plague has invaded the United States, and it is to be noted that the first step in its conquest was to overcome benighted opposition of the business world to the publicity of the matter.

Hundreds of thousands of dollars have been spent for the eradication of the plague in San Francisco and other places in California. The discovery that the infection is carried by fleas distributed upon rats gives the key to hygienic control. It has lately been reported that squirrels east of the rocky mountains have been found bearing fleas infected with plague germs. This means it behoves all the states and cities of our land to institute active campaigns against the rats.

The investigations of Dr. Stiles, of the U. S. Marine Hospital Service, have given medical science control over the hook worm. The origin, development and life process of the hook worm have been thoroughly studied, and diagnosis of the hook worm disease is made now by practical methods, and its prevention and its cure have been laid down.

It is undoubtedly true that a wise and far-sighted economy will lead the United States to conserve their vital resources by every possible method. These resources depend upon two primary conditions, heredity and hygiene. Vitality is partly inherited and partly acquired. Galton, Pierson and others are trying to found the new science of Eugenics, by which is now meant, not a scheme of governmental interference of marriage, but the gradual establishment in the public opinion of the fundamental standards. Just as today the marriage of brother and sister is unthinkable, Galton suggests that the time will come when marriages which tend to degeneration will be equally tabooed. The results will be not to make marriages more artificial, but less. Health, beauty and morality are much more to be desired than titles and money that now exercise baneful influences on marriage.

So far as the work of the state is concerned in eugenics, Indiana has taken the lead. Her laws forbid the marriage of the insane, of first cousins and of persons inflicted with transmissible diseases. The Indiana sterilization law has attracted wide attention, and has met with the approval of hygienists all over the world. Inquiries have come from all the European countries, from many South American states, from Siberia, Australia and Japan. This shows that a wide interest exists in improving the human race through scientific methods and in eliminating crime, immorality and physical defects. Marriage alliances among criminals, paupers and the feeble-minded must not be allowed to continue.

Antiseptic surgery has within the last century been the pride of the profession, and has given it a greater prestige than before. It has greatly reduced the mortality among operations and increased the number and kinds of operations which can be performed in cases which under the old régime would necessarily have proved fatal. In the practice of medicine the tendency is to give up the use of violent drugs and to depend more upon hygiene. Through the fight against tuberculosis, physicians have come to prescribe fresh air in their general practice, and they are now largely advocating outdoor exercise and mental activity. There is danger that these new fields will be preempted by quacks unless the medical profession is unusually active, and in order that moral hygiene may be applied by trained physicians it is necessary that the profession be more vigilant in this direction.

It seems that the most important place in life to emphasize the benefits of hygiene is in school life. The care of the health of school children is especially important. Everywhere we find them surrounded with conditions inimical to health. Schoolhouses are badly ventilated, unevenly warmed, wrongly and insuf-

ficiently lighted and also wrongly seated. School children are permitted to continue day to day bearing the burden of physical defects which might be removed. Spinal curvature on account of wrong seating and wrong lighting of school rooms is not uncommon. Children with astigmatism, myopia and other eye defects are left unattended to and permitted to stagger on in their struggles to the schools.

In respect to school hygiene it is lack of application of knowledge which is at fault and not lack of knowledge. All parents know that decayed teeth are not only a source of suffering to children but retard their growth, interfere with their happiness and prevent mental progress. Yet teeth are not looked after as they should be, and in consequence the loss of child efficiency is enormous. In some instances 60 and in others over 70 per cent. of the school children are found to need medical or surgical attention, and all too frequently they need nourishment. Forty to 50 per cent. need dental care; 30 to 40 per cent. have enlarged glands of the neck; 25 to 30 per cent. have defective hearing and 10 to 18 per cent. have enlarged tonsils. Eye strain is one of the great faults of civilization and usually makes its first appearance in school. Eye strain appears when the pupil tries to accustom the eye to the short range which she or he requires but for which the mechanism of the eye is not well adapted. The evil effects of eye strain are not confined to the eye entirely, but extend to the hearing and nervous system. Dr. Gould makes the claim that eye strain is the chief cause of the functional diseases of our citizens.

These few facts, imperfectly presented, show the importance of medical inspection of school children and of school hygiene generally. Your committee therefore limits its recommendations, and is content with suggesting that a special committee of the State Medical Society be appointed to consider and report upon the necessity of medical inspection of school children. It is further recommended that this report be so prepared that it may be published in newspapers for general circulation and that the committee be empowered and directed to carry on in the name of the Indiana State Medical Society a propaganda of school hygiene.

Respectfully submitted,

J. N. HURTY, Chairman.
A. P. BUCHMAN,
F. A. TUCKER.

REPORT OF COMMITTEE ON TUBERCULOSIS.

In the past year much has been accomplished by the various tuberculosis organizations in the state. The most signal event has been the completion of the state institution at Rockville. This institution has been thoroughly organized and much of the construction work completed. It was unfortunate, however, that the recent legislature did not see fit to make an appropriation for the reception and care of patients. However, with the buildings constructed, we reasonably anticipate from the next legislature an adequate appropriation for their maintenance.

The Indianapolis Medical Society and other medical societies in the state have done much work of an educational character, the exhibit of the Indianapolis Medical Society at the recent meeting of the American Medical Association, being very cordially received. This exhibit has been placed on display in various public buildings in Indianapolis, and has stimulated much

public interest in the tuberculosis problem. Various dispensaries have taken up the work, and in addition to the good accomplished have furthered public interest in the same.

The successful organization and administration of the Rockwood Tuberculosis Hospital, near Danville, Ind., have been of great value to the professional as well as lay mind, as the possibility of effecting a permanent arrest of the disease in Indiana is more genuinely appreciated than was formerly the case.

All in all, this committee wishes to report a most healthful activity on the part of those interests that are making an effort to combat tuberculosis.

Pulmonary tuberculosis can be as successfully combatted within the State of Indiana as elsewhere. The trend of studious opinion in the last ten years has been to discount the effect of climate on a tuberculous individual. We now know very definitely that in a large majority of cases of tuberculosis the ill-defined trip to California or Arizona, so popular in years gone by, has in most cases effected an actual damage to the patient. The achievements of institutional and private practice in cases of pulmonary tuberculosis within this state, have shown without doubt that an individual can recover from pulmonary tuberculosis as readily within the state of Indiana as elsewhere. It is not the purpose of this committee to advertise the state of Indiana as a tuberculosis refuge, yet, in fairness to our own citizens it may be encouraging to know that the capacity for recovery from pulmonary tuberculosis is as great at home as abroad. In either case, the likelihood of recovery is directly proportionate to the thoroughness with which the patient follows intelligent medical direction.

It has been a most interesting study to consider the localities in best medical repute for the recovery of tuberculosis, at various periods. A time there was when "the Pittsburg region" was cordially advised as a place of residence for patients suffering from pulmonary tuberculosis. Still later we read of the great good obtaining by living in the "Wabash valley and plains of Illinois." Later still we are entertained by the reputed merits of "Colorado, New Mexico and California," as well as "Texas." They have each held the center of the stage for varying periods.

It is very generally held that the most critical period in the cycle of the tuberculous individual is when his infection becomes mixed. All of the various geographical desirabilities listed have had their day of maximum reputed choiceness when they were reasonably uninhabited. As the population increased the country of greatest popular repute for tuberculous cases moved farther on. In all these cases it was practically the outskirts of civilization. The advantages these locations had at various times over the more congested areas of population appear to be their lessened capacity for reinfection. For in all cases, as the population increased and the likelihood of infection by contact increased, their repute as desirable locations became less. The West and Southwest are practically as ridden with infection as Indiana, and offer practically no advantage over this state as a place for the arrest of pulmonary tuberculosis. Many hundreds of our citizens have recovered from tuberculosis here at home, and many hundreds have lost their lives because of ill-advised climatic pilgrimages. There is no climatic Utopia for the arrest of tuberculosis, and Indiana is as good a climate in which to get well as any.

It is generally accepted that an individual had best effect his cure in the climate in which he intends to

permanently reside, as the likelihood of recurrence is less. It is a matter of very common observation, and almost everyone knows of families showing this, that an individual will effect a cure in a climate very remote from his home, and then be at the necessity of establishing a permanent residence there, away from friends and family.

Patients with pulmonary tuberculosis can and do get well within the state of Indiana.

T. VICTOR KEENE, Chairman.

JOHN A. LITTLE,

J. A. GIBBONS,

H. O. BRUGGEMAN,

W. M. VARBLE.

REPORT OF COMMITTEE ON MEDICAL EDUCATION.

The Committee on Medical Education begs to report:

First.—The final step in the consummation of the union of medical interests in the state of Indiana, through the passage of an act by the legislature on Feb. 26, 1909, authorizing the trustees of the Indiana University to conduct a medical school in Marion county, Indiana, to receive gifts of real estate and other property in behalf of the state of Indiana for the maintenance of medical education in said county, and declaring an emergency. This act legalized the union of the Indiana Medical College with the Indiana University School of Medicine under the name of the latter. The work of the past year of the combined school has been very successful and gratifying, 270 students were in matriculation and 64 seniors were graduated.

Second.—An increase in entrance requirements in the Indiana University School of Medicine to one year of collegiate work in addition to a four-year high school course in 1909, and a four-year high school course plus two years of collegiate work in 1910.

The reason for this increase in entrance requirements was the passage of a resolution by the Association of American Universities and the National Association of State Universities in January of this year, whereby the twenty odd state and non-state universities, members of these associations, must require, as a condition of membership, one year of collegiate work in 1909 and two years of collegiate work in 1910 for entrance in professional schools (law and medicine). Indiana University is a member of these associations, so the matter of increasing entrance requirements in the Indiana University School of Medicine to meet the demands of these associations was presented to the medical faculty, and, after due consideration, a motion to increase entrance requirements as above stated was unanimously carried. It is gratifying to learn that in spite of this increase in requirements the enrollment in the freshman class this fall will be nearly as great as that of a year ago, due, no doubt, to the fact that with increased requirements the school now attracts those well prepared students who formerly would have gone to other schools demanding one or more years of collegiate work for entrance.

Third.—Representatives of this committee have attended the meetings of the Association of American Medical Colleges, the Council on Education of the American Medical Association and the Association of State Licensing and Examining Reciprocal Medical

Boards, and so the committee has kept in touch with the work of these associations.

The two associations first named have recommended courses of study in which the amount of time devoted to each subject has been carefully considered so that each subject is given due prominence in the course. These reports have been carefully studied and fully discussed in preparing the curriculum of the Indiana University School of Medicine for the ensuing year, so that a well balanced course is assured.

Fourth.—Beginning with the session of 1909-10 a fifth (optional) year is added to the medical course of the Indiana University School of Medicine. The work of the year will be: 1. Graduate work in one of the departments of the school of medicine. 2. An internship in a hospital under the following conditions: (a) Each student taking such a course must be under the constant supervision of the medical faculty, by whom the hospital in which the internship is taken must be approved. (b) The student must present evidence of thorough clinical work, and if possible an exhaustive study of a selected group of cases involving original work. (c) He will be required to pass a special examination at the close of the year. On the successful completion of this year of work the student will be granted the degree of Doctor of Medicine cum laude.

Fifth.—The State Medical Boards of six states have taken an advanced position in that they have required one, and in a few cases two years of collegiate work as a prerequisite to the licensure examination. In view of this fact and the further consideration that the one medical school which we have so long striven for has announced an increase in entrance requirements, your committee begs to submit the following:

Resolved, That the Indiana State Medical Association recommends to the State Board of Medical Registration and Examination the consideration of the desirability of increasing the state requirement for the licensure examination at the earliest date which, in their judgment, may seem advisable.

B. D. MYERS, M.D., Chairman,
W. A. SPURGEON,
STANLEY COULTER,
ALBERT E. STERNE,
D. C. PEYTON.

REPORT OF COMMITTEE ON INEBRIETY.

Believing that there is no longer any doubt that certain types of inebriety must be labeled disease, and that they require for their best management a well equipped hospital especially designed for that purpose, we prepared and had placed in the hands of a state senator a bill for the establishment of a state hospital for the treatment of inebriety in its various forms. The state of legislation was such, however, that it was not deemed worth while at any time to introduce a bill carrying an appropriation, so that nothing was done along this line.

Thinking that perhaps something in an educational way might be done by a commission, another bill was actually introduced into both the senate and the house for the appointment of a commission to serve without pay and report to the next legislature for their guidance in legislation along these lines. Owing to the crowded condition of the calendar in both houses this bill was not reached, and nothing whatever was accomplished in this way.

It is interesting to note what has been done in the way of institutional treatment in other countries. The

latest available statistics for continental European countries were for 1903 as follows:

Germany	12 institutions
Switzerland	10 institutions
Russia	4 institutions
Norway	2 institutions
Sweden	3 institutions
France	2 institutions
Holland	1 institutions

The Swiss hospitals, which are regarded as the most successful, are under private control, but receive aid from and are subject to the supervision of the canton governments. They report 40 to 50 per cent. of their patients entirely cured.

In England there are (1909) 22 private institutions, 11 public institutions (or reformatories) to which drunkards are committed by the courts, and 2 government institutions for the more refractory cases. The private hospitals treat about 500 cases a year altogether. The following is the inspector's reports for the public "reformatories":

Year.	No. Reform- atories.	No. of Beds.	No. of Cases Admitted.	Under Detention at Close of Year.	Dis- charged on Li- cense or Absent.
1899.....	4	227	88	87	1
1900.....	5	416	144	182	30
1901.....	6	478	204	288	148
1902.....	8	624	278	419	295
1903.....	9	677	298	579	433
1904.....	11	1073	418	803	627
1905.....	11	1251	443	970	903

It is difficult to determine just what proportion of cases are cured in either the private or public institutions; the estimates for different institutions vary from 30 to 70 per cent. The Dalrymple Home (London) reports 33 per cent. absolutely temperate; 21 per cent. notably improved.

In the United States there are about fifty hospitals for inebriates with 4,000 to 5,000 patients. There are only two state institutions, at Foboro, Mass., and Knoxville, Iowa. Reports of results have not been obtained from the private institutions. The state institutions report as follows:

Massachusetts: In the year 1905-1906, 230 cases were discharged on time limit or by leave of absence; of these 93, or 40 per cent., remained temperate; 37, or 16.08 per cent., had improved; 55, or 23.91 per cent., unimproved; 37, or 16 per cent., not found; 8, or 3.49 per cent., deceased.

Iowa: For two years ending June 30, 1908; number of patients received, 774; of these, 300 who report regularly have remained temperate.

Some states have no state institutions for the care of inebriates but make legal provision for their commitment to private institutions. This is true of Connecticut, Colorado, Delaware, Louisiana, Maryland, Michigan, Mississippi, New Jersey, North Dakota, Oklahoma, Vermont and Wisconsin.

There is undoubtedly a growing tendency in favor of public institutions for the care of inebriates. The report of the New York State Charities Aid Association, which is one of the best on the subject, makes the following statement:

"Medical authorities are unanimous in saying that more or less prolonged treatment in an institution to which the person is committed, is the only possible way to deal with an habitual drunkard."

GEO. W. McCASKEY, Chairman.
H. J. HALL.
C. A. DAUGHERTY,
L. WORSHAM.
G. K. THROCKMORTON.

REPORT OF COMMITTEE ON NECROLOGY.

Since the establishment of our JOURNAL in lieu of the annual transactions, county secretaries have almost entirely ceased to send obituary notices to me as chairman of this committee. A few have done so and I have promptly forwarded them to the editor; others send them direct to THE JOURNAL. I have gleaned quite a number of notices from the daily papers and referred them to THE JOURNAL.

With the limited number of pages in THE JOURNAL, space for obituary notices must necessarily be restricted. If deaths are not recorded the county society must assume the blame.

G. W. H. KEMPER, M.D., Chairman.

REPORT OF COMMITTEE ON SCIENTIFIC WORK

The Committee of Scientific Work of the Indiana State Medical Association has in the arrangement of the program endeavored to make the work as comprehensive as possible, both as to the territory represented by the essayists and as to the scope of scientific matter presented.

It is regrettable that so few papers dealing with the special departments have been handed in. However, insomuch as there are few diseases in which no interesting complications affecting the special sense organs occur, it is hoped that all members of the association may find interesting and profitable topics for discussion upon the program.

Owing to the circumstance that but two days are assigned for the meeting and a large number of papers are to be read and discussed, it is respectfully urged that all essayists and discussers conform strictly to the rules governing time allotment in the reading and discussion of papers. It is also important in this connection that essayists and discussers be present in the halls assigned when their names are called.

JOSEPH RILUS EASTMAN, Chairman,
F. C. HEATH.
A. C. KIMBERLING.

REPORT OF THE COMMITTEE ON THE PREVENTION OF VENEREAL DISEASES.

It is not the desire of the Committee on the Prevention of Venereal Diseases to make a lengthy report, but to offer to the House of Delegates one recommendation which we think, if carried out, will strike at the very root of the plague of venereal diseases.

Much has been accomplished in Indiana by Dr. Hurty, secretary of the State Board of Health, through the distribution of pamphlets giving pertinent facts concerning venereal diseases. These pamphlets have been well received, and been both timely and effective. But it is our belief that we should go one step further, and we therefore recommend that the anatomy and physiology of the sexual organs, and knowledge concerning the existence and pathology of venereal diseases be taught in our public schools in such a manner as consistent with the established teaching of biology. We feel that the "hay-mow" education of children in sexual physiology should cease, and that the young should be reared in the protective strength of knowledge rather than in the impious innocence of ignorance.

Following manner of last year in submitting a thesis bearing upon one phase of the vast problem with which

we are working, we offer a paper on "The Rôle the Neisserian Coeus Plays in the Production of Childless Marriages," prepared by a member of this committee (published in this issue of THE JOURNAL). This paper ably calls attention to one of the many reasons why physicians should be interested in the prevention of venereal diseases.

GOETHE LINK, Chairman, Indianapolis,
C. E. BARNETT, Fort Wayne,
H. A. MOORE, Indianapolis,
H. H. SUTTON, Aurora,
C. W. HARTLOFF, Evansville.

Do NOT forget that THE JOURNAL, of which we believe every member of the association should be proud, is dependent upon advertising for the greater part of its support. The advertiser is not paying for space in THE JOURNAL without expectation of securing returns, and he can only secure returns through the patronage of the members of the association, who are not only the readers of THE JOURNAL but its owners. Reciprocity is, therefore, but fair, and we urge the members of the association to make a special effort to patronize our advertisers.

PRESIDENT KAHLO is calling a meeting of County Medical Society officers for the purpose of discussing ways and means of increasing the size, activity and influence of their respective organizations. This ought to be one of the most important meetings of the coming session of the state association to be held at Terre Haute. We have often said that a secretary can either make or break a society, and the truth of this statement can be verified by inspecting any county medical society in Indiana. Wherever you find a live, progressive medical society you find an energetic and enterprising secretary. Wherever you find a dead or apathetic medical profession you find an inactive and unprogressive man holding the position of secretary of the county medical society, whether such society has an existence in fact or only on paper for purposes of representation.

If President Kahlo succeeds in stirring up some enthusiasm and activity in the dry bones of some of the county medical society secretaries in Indiana he will have accomplished a result that will be worthy of any effort he puts forth. Here's hoping that when he gets through with the county society secretaries there will be "something doing" in a medical society way in some of the counties where now one must mention a medical society twice and in a loud tone of voice in order to make the doctors of the locality know what is meant.

THE JOURNAL

OF THE

INDIANA STATE MEDICAL ASSOCIATION

Devoted to the Interests of the Medical Profession of Indiana

Office of Publication, 219 W. Wayne St., Fort Wayne, Ind.

SEPTEMBER 15, 1909

EDITORIALS**OUR PRESIDENT.**

Dr. George Dwight Kahlo, president of the Indiana State Medical Association, was born at Napoleon, Ohio, April 27, 1864. His father's family moved to Defiance, Ohio, in 1867, to Logansport, Ind., in 1870, to Sidney, Australia, in 1881, and to Indianapolis in 1888. He received a public school education at Logansport. During his residence in Australia he was secretary to his father, who was the United States Consul, appointed by President Garfield.

Dr. Kahlo entered Bellevue Hospital Medical College October, 1888, and was graduated in the class of 1891. He served two years as interne and house surgeon in Bellevue Hospital (Harlem branch). He went to Indianapolis in the spring of 1893, and entered general practice. He served as police surgeon during the term of Mayor Denny. He continued in active practice in Indianapolis until he removed to French Lick in the spring of 1906. In 1903 he took special courses in gastrointestinal diseases with Dr. Max Einhorn, of New York, and in 1905 he took similar courses in hospitals in Germany and Austria. On his return from Europe in 1905 he devoted his energies entirely to internal medicine.

For many years Dr. Kahlo held the chair of Professor of the Practice of Medicine in the Central College of Physicians and Surgeons at Indianapolis and was dean of that institution when it united with other medical colleges of the state to form the Medical Department of Indiana University. At the present time he holds the chair of Professor of Clinical Medicine in the Indiana University School of Medicine. He is a member of the American Gastroenterological Society, the American Medical Association, and his county and state associations. He was elected president of the Indiana State Medical Association at the session held in French Lick, June, 1908.

Dr. Kahlo was married to Miss Olive Gaston, daughter of John M. Gaston, on June 10, 1896. He has two children, one girl and one boy, aged 9 and 7. He has just returned from spending the

summer abroad, where he has made extensive investigations of the various mineral springs and health resorts.

Possessed of a genial disposition, pleasant address, and frankness of character, Dr. Kahlo has warm friends and admirers wherever he goes, and these personal qualities, together with recognized superior professional ability, has brought him a large and lucrative practice.

THE COMMON HOUSE FLY AS A CARRIER OF DISEASE.

The Merchants' Association of New York City has taken an active interest in public health and sanitation matters. A committee of the association is making an effort to break down the present method of disposing of sewage, which is not only rapidly tending to fill up the waterways and impair their usefulness for the purpose of navigation, but is also a most active agent in the spread of disease.

In an elaborate pamphlet recently issued the committee shows that the pollution of New York harbor is a menace to health by the dissemination of intestinal diseases through the agency of the common house fly. Fly traps were placed on piers, under piers, one block from the river, and so on around the water front in the various boroughs. Inspectors were detailed to gather and capture flies, which were taken to the laboratory and counts made of their numbers and the material on the body, mouth and legs of the insects examined. The form and character of the fly's body is particularly adapted for carrying infectious material, and, as they breed in fecal matter almost exclusively and at the rate of thousands for each individual fly, the consequent facility for the spread of disease-breeding germs is apparent. To prove by experiment, captured flies were thoroughly cleaned and then allowed to walk over infected material. They were again examined and the material which they carried analyzed. In one instance a fly captured on South street was found carrying in its mouth and on its legs over one hundred thousand (100,000) fecal bacteria, showing the affinity to dangerous germs for this active medium of dissemination.

There were 5,247 cases of typhoid fever and all other intestinal diseases in the city of New York in one year during the months from July 1 to November 1. Investigation showed that as the temperature rises the flies become more active and intestinal diseases become generally prevalent, with the corresponding increase in mortality. An erroneous impression inclines to the

belief that the disease is due to hot weather. While climatic conditions by reducing the vitality favor the contraction of the disease, they are not usually a real cause of it. The temperature does not produce the specific germ which invariably accompanies the malady. The activity of the house fly is in proportion to the temperature, and the time at which it is most active and most numerous corresponds exactly with the time of the contraction of typhoid and other intestinal diseases. Intestinal diseases are shown to be prevalent in a certain belt, extending around and near the water front, a district in which the inhabitants are densely massed and made up of the poorer people. At points where the sewer outlets were infrequent, notwithstanding the maximum of population, the mortality was much less as compared with other districts where the sewers were numerous. In many or most parts of the city, especially at a distance from the water front or at points where no fecal matter was exposed, very few flies were found.

The activity of the common house fly extends over a very few weeks of the summer, after which most of them are frozen or killed by moles and other parasites. The few which hibernate and come out in the spring are noticeable in numbers in this climate about the month of June. These flies soon begin to lay eggs, preferably in horse manure, but they also lay in human excreta and in decaying animal and vegetable matter. These eggs are long and white and hatch in from six to eight hours. The larvae, which are white pointed maggots, grow rapidly, cast their skins twice, and in favorable conditions reach full growth in four or five days. The outer skin then becomes hard, swells up, turns dark brown in color, and within it the true pupa is formed. In about five days the adult fly issues forth from a round hole in the anterior end of the brown covering. The total time required for a single generation is about ten days, and the number of generations is said by some authorities to be as high as twelve during the summer. The number of eggs laid by each female fly during the season is about 1,000. Considering this, and the number of generations each summer, the enormous numbers in which the insect occurs is well accounted for.

Much has been said about the scattering of disease germs by mosquitoes, but they are not to be compared with flies as disseminators of disease. The committee shows that the pollution of the river through the medium of flies is a grave danger to foodstuff. Most of the fish markets are near or over the sewage-laden waters and the rivers. Meat, fruit and vegetables are

all exposed to the same peril. Flies travel from filth to food and are carried to the kitchen and dining-room through various delivery methods.

It has been clearly established that the excessive prevalence of certain diseases coincides with the presence of accumulations of infected human excreta and with the presence of aggregations of flies as the active agents for transmitting the diseased germs derived from the excreta. The committee of the Merchants' Association of New York therefore urges that some effort be made to prevent the discharge of untreated sewage and to restrict, and if possible abolish, the practice of discharging disease-laden sewage in the nearest public waters.

The committee issues for public distribution the following rules for dealing with the fly nuisance:

"Keep the flies away from the sick, especially those ill with contagious diseases. Kill every fly that strays into the sick room. His body is covered with disease germs.

"Do not allow decaying material of any sort to accumulate on or near your premises.

"All refuse which tends in any way to fermentation, such as bedding straw, paper waste and vegetable matter, should be disposed of or covered with lime or kerosene oil.

"Screen all food, whether in the house or exposed for sale.

"Keep all receptacles for garbage carefully covered and the cans cleaned or sprinkled with oil or lime.

"Keep all stable manure in vault or pit, screened or sprinkled with lime, oil or other cheap preparations, such as are sold by a number of reliable manufacturers.

"See that your sewage system is in good order; that it does not leak, is up-to-date, and not exposed to flies.

"Pour kerosene into the drains.

"Burn or bury all table refuse.

"Screen all windows and doors, especially in the kitchen and dining-room.

"If you see flies, you may be sure that their breeding place is in near-by filth. It may be behind the door, under the table or in the cuspidor.

"If there is no dirt and filth there will be no flies.

"If there is a nuisance in the neighborhood write at once to the health department."

To KILL FLIES: The *London Lancet*, one of the leading medical journals of the world, says: "The best and simplest fly-killer is a weak solution of formaldehyd in water (two teaspoonfuls to the pint). Place in plates or saucers throughout the house. Ten cents worth of for-

maldehyd will last an ordinary family all summer. It has no offensive smell, is fatal to disease organisms, and is practically non-poisonous except to insects. Pyrethrum powder, which may be bought at any drug store, burned in the house, will also kill the flies."

The work of the Merchants' Association of New York is deserving of duplication in any locality, and in particular in the congested districts where the disposition of sewage is a matter of importance. The medical profession can do much toward educating the public concerning the necessity for properly caring for sewage of every description in an endeavor to limit the propagation and dissemination of disease. People should be taught to recognize the common house fly as a carrier of disease and the proper disposal of sewage and vegetable waste as necessary in restricting the spread of disease.

COLON BACILLUS INFECTION OF THE URINARY TRACT IN INFANCY.

When one stops to consider the frequency with which many infants are allowed to remain in their soiled diapers for a rather considerable length of time the wonder is that we do not oftener see bladder and kidney infections by the colon bacillus. Possibly there are two reasons for the apparent rarity of this condition—viz., either an unusually high degree of immunity, acquired, perhaps, by such repeated small doses of the infective material as might be absorbed from day to day, or else ascending infection of the genitourinary tract in infancy is decidedly rare. John Lovett Morse, in the September number of the *American Journal of Medical Sciences*, declares, however, that such infection by the colon bacillus is not at all uncommon, and further states that the reason it is not more often recognized is either because physicians are not familiar with the condition or else do not bear it in mind. The affair has been described by various authors under different names, as bacteriuria, pyelitis, cystopyelitis, colieystitis, pyelonephritis, dependent upon the individual microscopic findings. The pus and bacteria in the urine are usually associated with various sorts of epithelium and sometimes with casts. As to the mode of infection, Morse believes that theoretically it is possible for the infection to take place in three ways—viz., (1) through the blood—hematogenous or descending theory; (2) through the urethra—ascending theory, and (3) through the tissues between the intestines and bladder—transparietal theory. It is entirely possible for the bladder to

become infected by any one of these three routes, and indeed Morse believes from his experience that the method of infection is not always the same. He feels that it is reasonable to conclude, however, that in the majority of cases in girls (and the affection is much more common in girls than in boys, probably because of the short, wide urethra) the infection is through the urethra, while this route is unusual in boys. In most cases in boys, and in a fair proportion of those in girls, he thinks the infection probably transparietal, while in both sexes it is occasionally hematogenous.

The pathologic changes are said to be slight, consisting of some reddening and swelling of the mucous membrane of a part or whole of the urinary tract, some desquamation of the epithelium, and sometimes the evidences of degeneration of the lower tubules of the kidney. The urine is usually pale and turbid, due somewhat to the bacteriuria, but mostly to the large number of pus cells; the reaction, acid, and albumin is present in small amount only. The microscopic sediment shows large numbers of pus cells, epithelial cells of various forms, and occasionally hyaline or fine granular casts. The total output remains practically unaffected. Regarding the symptomatology, there is ordinarily little to direct the attention to the urinary tract, the symptoms being merely a rise in temperature, whose irregularity suggests confined pus, though sometimes simulating atypical malaria, accompanied by the usual manifestations of febrile disturbances in infancy. Tenderness or enlargement of the kidney is not as common as tenderness over the bladder. Frequent and painful micturition, retention and enuresis are not as common as might be expected. Loss of weight and anemia develop rapidly, the latter being ascribed by Durante to specific hemolysins formed by the colon bacillus. Blood examination always revealed a leucocytosis. Speaking in a general way, the symptoms are so mild that a correct diagnosis will only be possible after a careful urinary examination; hence the importance of this measure in every physical examination of a child suffering from an obscure condition.

The ultimate prognosis is good, only one of the author's fifty cases proving fatal, although the duration of the disease is, in most cases, prolonged. Exacerbations are common, relapses and complications fortunately rare.

Local treatment of the bladder is of comparatively little value and, ordinarily, not indicated. Two groups of drugs are of value in the order named—viz., alkalies and hexamethylenamin or

its compounds. In the cases that resist other modes of treatment and are becoming chronic, autogenous vaccines should be tried, and in the author's experience have seemed to do good in some instances.

IS THE COLON TUBE AN ILLUSION?

The pediatrician, and indeed the general practitioner, can not but read with interest the results¹ of the studies of H. W. Soper in sixty cases, wherein by the aid of bismuth and skiagrams the exact position of the introduced colon tube was determined. Probably no conscientious clinician ever attempts the introduction of the colon tube without a great deal of uncertainty as to whether it is going to reach its desired destination, and Soper declares that the question as to how far into the colon it is possible to introduce a soft rubber "colon tube" appears to be as yet not definitely settled. Not only does the author incline toward the stand taken by Nothnagel, Naunyn, Boas and others—viz., that the soft tube always coiled up in the ampulla or dilated portion of the rectum and could not be made to pass through the sigmoid, save in Hirschsprung's diseases (congenital, idiopathic dilatation and hypertrophy of the colon)—but he presents a series of skiagrams that would seem almost conclusive evidence in favor of this stand.

Aldor, on the other hand, has asserted that he is able to introduce a 32-inch soft rubber tube into the descending colon and presented two x-ray pictures, one with a tube coiled up in the rectum, the other with a tube apparently in the descending colon. His radiograms, however, fail to show the bony landmarks so essential to perfect anatomic orientation. He insists that the tube must be passed the "right way," which he describes as with the patient on his left side, the well-oiled tube being slowly introduced, slightly withdrawn when resistance is felt and then again advanced. He declares that fluid introduced through a short tube in the normal rectum collects in the ampulla and never reaches the colon. The fallacy of this latest statement has been conclusively proven by Rieder and many others who have sketched bismuth in the cecum introduced by means of a short rectal tube. Indeed one of Soper's skiagrams shows the descending, transverse and ascending colon and a portion of the cecum fairly well filled with bismuth and oil given one hour previously through a soft rubber tube introduced four inches into the bowel of a patient lying on his left side.

Soper concludes his article by declaring it to be his belief "that it is only in those rare cases of abnormal development of the sigmoid that it is possible to introduce a soft rubber tube higher than six or seven inches in the rectum without its bending or coiling on itself. Without the aid of the sigmoidoscope only the middle of the sigmoid can be reached. The practice of allowing liquids to flow through simultaneously with the introduction of the tube serves to smooth out the kinks and adds to the illusion that the tube is going higher." The short tube, six inches in length, he believes to be best either for cleansing purposes or for the administration of salines or nutrient enemata to be retained. He claims to have repeatedly cleansed the entire colon by the use of a short tube of large (one-half inch) caliber, and declares that, because of the coiling that inevitably occurs upon an attempt to introduce the tube higher, an irritability will be produced that will in all probability result in the expulsion of the fluid.

When one stops to consider the anatomic barriers, such as the sphincter muscle, folds of mucosa, Houston's valves, O'Beirne's sphincter and the angulations of the bowel caused by the attachments of the mesosigmoid, the difficulty of even the most careful introduction of the tube will be readily appreciated. Again, a skiographic study of the distended ampulla will readily reveal the great probability of coiling, so that the usual guide—viz., that of the retention rather than the expulsion of the fluid—becomes a rather dubious one. It is more than likely that the short tube and proper elevation of the hips in the dorsal, Sims or knee chest position, combined with gentle massage of the abdomen, will accomplish as much, if not more, than any attempt at the high introduction of the tube.

EDITORIAL NOTES

THE place, Terre Haute.

The time, October 7 and 8.

The attraction, the annual session of the Indiana State Medical Association.

IT SHOULD not be forgotten that the house of delegates, the council, and the officers of county societies each have meetings in Terre Haute on Wednesday evening, October 6.

THE social features of our annual sessions are deserving of attention, but not at the expense

of the scientific meetings. We can be active in our work and active in our play without permitting one to interfere with the other.

DR. WOOTTON, whose correspondence appears in this number of *THE JOURNAL*, suggests the formation of a "Boosters' Club." It may not be necessary to organize a club, but the suggestion to eliminate "knocking" in the medical profession is certainly worthy of adoption.

VACATION time is over, and many a medical man who has spent from two to four weeks in rest and recreation far from the calls of professional life will return to his work with a new store of energy and enthusiasm which leads to more and better work than would otherwise be possible.

THE principal addresses to be delivered at the Terre Haute session will alone be worth a trip to Terre Haute. Dr. Joseph Collins, of New York City, who is to be the guest of the association, will deliver an address at the evening meeting on Thursday, his subject being "Heredity and Disease." On the same evening Dr. George D. Kahlo will deliver his presidential address, his subject being "The Art of Medicine."

TYPHOID time is here, bringing with it recollections of polluted water or tainted food on the farm, in the camp, or at the summer cottage or hotel. How long will it be before all the people will learn that typhoid fever means eating or drinking sewage, that the privy can not be near the well or source of water supply, that garbage must be destroyed, and that flies, as the greatest carriers of disease germs, must be kept away from food?

THE Indiana University School of Medicine is now in session for the season of 1909-10 and gives promise of doing more and better work than ever before. It is the only regular medical school in Indiana, and, being under state control and support and having a large number of competent instructors, it ranks with the great institutions of learning in this country. It invites patronage of students from any locality, but in particular from Indiana, and it offers all of the advantages of a progressive and thoroughly equipped medical institution.

For the benefit of those who are looking up train connections for the Terre Haute session we wish to say that there are five railroads entering Terre Haute—the Vandalia, Evansville & Terre Haute, Chicago & Eastern Illinois, Evansville & Indianapolis, and Southern Indiana Railroads. The total number of passenger trains in and out of Terre Haute by these five railroads is seventy. In addition to the railroad connections there are four interurban lines, all branches of the Terre Haute, Indianapolis & Eastern Traction Company, which enter Terre Haute.

WE HOPE that the work of the House of Delegates at the Terre Haute session will not interfere with the scientific meetings, and if the program as prepared by the committee on arrangements is carried out there will be no cause for complaint. It is a little discouraging for an essayist to be called upon to present a paper before a very small audience and be obliged to suffer this injustice because a large number of the members of the association who otherwise would hear the paper are prevented from so doing through attendance upon a meeting of the House of Delegates. The meetings of the House of Delegates should be held at hours when there are no scientific meetings in session and adjourned promptly at the hour when scientific meetings are scheduled to begin.

IT IS to be regretted that more of the physicians of Indiana are not familiar with the excellent work done by the Indiana State Board of Health in efforts put forth to acquaint the public with pertinent facts concerning the propagation and spread of disease. The health circulars prepared by the board for distribution to the laity are worthy of more general distribution by physicians, and we hope that those doctors who have not seen or used the circulars will take the trouble to write the State Board of Health for copies of all of the principal health circulars, the same to be distributed whenever and wherever indications point to the accomplishment of some good by such distribution with the accompanying dissemination of knowledge.

OCTOBER 7 AND 8 have been announced as the dates for the session of the state association, and yet the committee on arrangements has provided a program for Wednesday evening, October 6. At this time the first meeting of the House of Delegates will be held, and also the meetings of the council and the officers of county

societies. It is not thought that these meetings will consume much time, as they are called primarily for the transaction of important business. Accordingly the Terre Haute medical profession has arranged for what they call the "big smoke," to be given on this evening, and that entertainment will no doubt prove an added attraction to draw the members to Terre Haute on the day previous to the one set for the opening of the scientific meetings.

IN THIS issue of THE JOURNAL we publish the completed program for the session of the Indiana State Medical Association to be held at Terre Haute October 7 and 8. Unfortunately but few essayists have furnished synopses of papers, and accordingly we are giving a list of titles only. The program committee has selected a list of subjects which promises an excellent treat for all those who attend the Terre Haute session. The number of papers has been wisely limited, thus insuring sufficient time not only for the reading of papers but thorough discussion. It is expected that, for the first time in the history of the association, the program will be carried out in every detail, and this means that no papers will be read by title or passed without due time being given for discussion.

IT SEEMS strange that such a lot of doctors lay awake nights trying to devise ways and means of injuring one or more of their fellow practitioners. Sometimes pure jealousy, sometimes pure cussedness, sometimes (and more often) a combination of the two is responsible for this state of affairs. But if we study this condition a little we will discover that the one who is hatching trouble for the other fellow is the one who in the end suffers most. The most successful men are those who find time entirely consumed in taking care of their own work, and neither have nor want time to create or encourage interruptions and unpleasantness in the other fellow's work. The public, and even friends, are not slow to place the proper estimate upon a man's conduct, and he who is wise will refrain from action which tends to reputation for doing other than "minding your own business."

PERHAPS you are buying your surgical instruments of a firm not numbered among the advertising patrons of THE JOURNAL. If so, we ask you to consider the advisability of giving your patronage to one of the several first class instrument firms advertising in THE JOURNAL. We are not condemning the firm from whom you buy your instruments because they do not advertise

with us, but we are asking you to give attention to your own interests by patronizing those who patronize you. You do not buy instruments that are better or on more favorable terms, quality considered, than you can obtain from any one of the several firms represented in THE JOURNAL, and, as you are a part owner of THE JOURNAL and want to see it get larger and better, it is but fair to ask you to help along the good work by bestowing your patronage where it will bring some returns to you.

THE report of the Committee on Tuberculosis of the Indiana State Medical Association, published in this issue of THE JOURNAL, is worthy of serious consideration. It is not the purpose of the report to advertise or develop Indiana as a center for the cure of tuberculosis, but to emphasize the fact that tuberculosis can be cured in Indiana as well as anywhere else. It should be a very great comfort to many poor people having tuberculosis, who have not the means required for a change of climate, to know that the disease can be properly cared for right at home with equally as good results as can be secured in other localities. It will also be of some value to physicians treating cases of pulmonary tuberculosis, as invariably the first issue to be met by the patient is whether he will do as well here as in California, Colorado, or New Mexico. The report, therefore, emphasizes the fact that Indiana is a good place to recover from pulmonary tuberculosis, and the report deserves widespread distribution.

THE medical men of Terre Haute promise to make the next session of the Indiana State Medical Association the best in the history of the association. The committee on arrangements has exhibited a large amount of enthusiasm, enterprise and energy, and in consequence the preparations for the session are unusually complete. No effort has been spared not only to arrange every convenience for the conduct of the scientific meetings, but particular stress has been laid upon the social program, which is always a feature that shares with the scientific program the attraction which brings members to the session.

Terre Haute is easily reached over several trunk line railroads, the season of the year is particularly favorable, and the scientific and social treat in store are sufficient to bring out a large attendance, and we believe our Terre Haute friends are not far from right in anticipating the largest, if not the best, session in the history of the association.

THE Morgan County Medical Society of Illinois boasts of having the best selected medical library in Illinois outside of Chicago. The society has a separate room at the public library of Jacksonville and has employed a salaried librarian to catalogue and index the publications and care for the library. The leading medical journals are taken and articles classified, and since this system has been introduced keener interest in the library has been aroused in all members of the society, and not only has greater personal use been made of the books on the shelf, but many physicians have been induced to donate volumes to the society and the collection has assumed large proportions, with many rare and choice works on the subjects of medicine and surgery. The last report of the librarian shows that the library now contains over 2,000 volumes, and the library association subscribes for thirty of the most valuable medical journals published in the English language.

What has been accomplished by this organization can be accomplished by any other medical organization in a reasonably populous county through organization methods.

FOR the most part dairymen are enemies of sanitation and disinfection in caring for and disposing of milk. In some localities the dairymen have even sought the assistance of the courts in efforts to make ineffective the laws or ordinances governing the handling of milk in a manner destined to do away with disease breeding and disease carrying. The truth of it is the average dairyman wants to do as little work and go to as little trouble as possible in order to secure the highest price for his product, and as long as he finds that public sentiment favors him he will continue his practices which add to the morbidity and mortality rate. Medical men can create a public sentiment which will demand cleaner and better dairy products, and in the interest of the army of defenseless children who must depend upon milk alone for diet the cause is worthy of the attention of every medical practitioner. Our state, county, and particularly our municipal boards of health are doing much to establish and maintain suitable regulations governing the care and disposal of dairy products, but their work would be much more effective if augmented by the active encouragement and support of the medical profession.

THE health record of Indiana is not one of which we should be proud. We still have a high morbidity and mortality from preventable diseases, and it seems uphill work to convince the

people of the state that it is possible to change this condition of affairs and at no great actual expense of time or money, and with an ultimate economic saving to the state.

Dr. J. N. Hurty, secretary of the State Board of Health, is an indefatigable worker and is recognized as one of the best health officers in the nation. His efforts through the medium of public lectures, public health circulars and newspaper articles has done much to educate the public. But, while he has been doing a great work, he has not accomplished what he would accomplish if he had a little more encouragement and support from the medical profession. In other words, results would be better if every physician would spread the gospel which Dr. Hurty is preaching by talking to the people on public health matters and telling them how disease can be prevented. Every individual should be impressed with the tremendous importance of good health and be instructed in the many ways in which health can be preserved.

THE commercial exhibit at the session of the Indiana State Medical Association, to be held at Terre Haute October 7 and 8, will be a feature less objectionable than such exhibits at previous sessions, for the reason that no drug, chemical or similar preparation used in the treatment of diseases can be exhibited which does not conform to the requirements of the Council on Pharmacy and Chemistry of the American Medical Association. The members of the association can therefore visit the commercial exhibit and patronize the exhibitors without feeling that they are lending their sympathy or aid to firms that are not living up to the highest standards of ethical medicine. Furthermore, the exhibiting firms will have the satisfaction of knowing that they are in good company. The prices for space in the commercial exhibit vary from \$10 to \$25, and it is expected that many very desirable firms will be represented.

The commercial exhibit, when properly conducted, is an educational feature deserving of continuance, and is alike profitable to exhibitor as well as members of the association. Dr. Charles N. Combs, of Terre Haute, has charge of the arrangements for this feature of the Terre Haute session.

THE Indiana University School of Medicine, through its pathological laboratory, located at Bloomington, offers free service to the physicians of Indiana in all lines of laboratory diagnosis falling within its province.

Material for examination should be prepared in the following manner:

1. Sputum, pus and other discharges to be examined for tubercle bacilli should be collected in perfectly clean bottles and preserved by the addition of equal volumes of 10 per cent. carbolic acid. The bottles should be sent to the laboratory protected by wooden boxes or mailing cases. Each bottle should be plainly marked with the name of both physician and patient, but need not be accompanied by a history of the case. The laboratory will not be responsible for mistakes in diagnosis arising from failure to comply with the above conditions.

2. Genito-urinary discharges, pus, etc., to be examined for gonococci, streptococci, and similar bacteria, should be spread in thin smears on glass slides or cover glasses and allowed to dry in air. The smears should then be sterilized by immersing them for at least fifteen minutes in strong alcohol (95-100 per cent.), should then be dried in air, and sent to the laboratory securely sealed and protected from breakage.

3. Blood to be tested for typhoid fever (Gruber-Widal agglutination test) should be collected in small drops on glass slides or cover glasses, allowed to dry in the air, and sent securely sealed.

4. Uterine scrapings, autopsy material, surgical material and other tissues should be placed in at least twice their volume of 10 per cent. formalin (one part commercial formalin to nine parts of water) and sent in securely sealed bottles, jars or tin cans. The laboratory will pay express charges on all complete autopsies thus sent in. Tissues for examination must in all cases be accompanied by a brief history of the case from which they were taken.

5. Directions for the preparation of other materials will be furnished on application.

Report on sputum, pus, genito-urinary discharges, etc., will generally be mailed within twenty-four hours after the material reaches the laboratory. Blood examinations will usually require forty-eight hours. Report on autopsy material, uterine scrapings and other tissues requiring imbedding, sectioning, staining and mounting will require about ten days.

All communications should be addressed to

THE PATHOLOGICAL LABORATORY,
INDIANA UNIVERSITY,
Bloomington, Ind.

we are printing the illustrations in this number. The legend under each picture sufficiently explains its connection with the text of the article.



Fig. 1 (Plate 1).—Photo of trunk showing the lesions of the *dermatitis ditropenotus aureoviridis*.

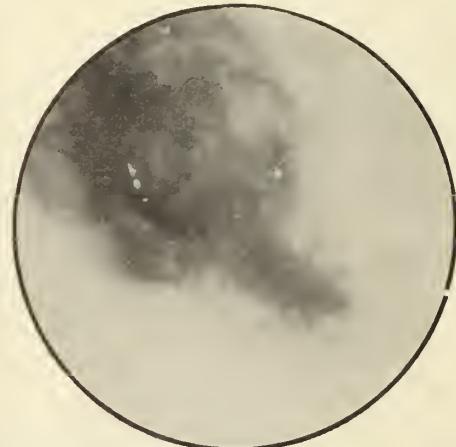


Fig. 2.—Microscopic photo showing scrapings from fresh lesions, showing the parasite and epithelium from case in Plate 1.



Fig. 3.—Microscopic photo showing parasite as taken from wheat straw.

In the August issue of THE JOURNAL we published an article by Dr. L. T. Rawles on "Dermatitis *Ditropenotus Aureoviridis*," and through an oversight the illustrations accompanying the article were not reproduced. At Dr. Rawles' request

CORRESPONDENCE

AN ENTERPRISING COUNTY SOCIETY.

NORTH VERNON, IND., Aug. 24, 1909.

To the Editor:—Jasonville is not the only pebble on the beach. At North Vernon, with a population of 4,000, all the physicians are members of the state and county associations and every physician in the county is a member of the state and county associations. We do not bid for township or county practice, and we were one of the first to adopt a blacklist.

Very respectfully yours,

JAMES H. GREEN.

PRAISE FOR THE JOURNAL.

MUNCIE, IND., Sept. 1, 1909.

To the Editor:—I wish to offer my personal commendation of *The Journal of the Indiana State Medical Association*. I have carefully gone over the several numbers of THE JOURNAL, and I sincerely congratulate you on its high standard. The paper is excellent, the type new and clear, typographical errors scarce as hens' teeth, advertisements clean, articles well selected, editorials up-to-date, news items interesting, and reports from county societies instructive. If a man is doing a good work it don't hurt to tell him so and thus encourage him. Keep right on.

Sincerely yours,

G. W. H. KEMPER.

A BOOSTING CLUB.

HOT SPRINGS, ARK., Aug. 7, 1909.

To the Editor:—Why not a "Booster Club" or "Praise Your Brother Club" in the American Medical Association, with no dues or other requirements except that each member pledge himself never to speak unkindly or in criticism of a brother physician to the laity except that physician be also present. Let us renew our vows and wear buttons to show that we mean to keep them.

If such a condition could be brought about we would be held in much greater esteem by our patients and neighbors. Whenever a physician is condemned, maligned or criticised by another physician the ill-will engendered in the minds of the laity is not against the one physician, but the class—individuals are forgotten and the profession is remembered as a whole. If I tell everyone I meet that Dr. Pill is a rank physician, knows nothing of medicine and will stoop to

any mean practice, the laity soon forget that Dr. Pill is a "poor doctor" and retain the impression that we are all "poor doctors" ready to stoop to anything.

Let's stop it; raise the standard. Can we get together at St. Louis and organize a club?

Yours for "no knocking,"

W. T. WOOTTON, M.D.

DEATHS

EMANUEL A. SMITH, M.D., a graduate of the Medical College of Indiana in 1892, died at the home of his brother in Bird's Eye, Ind., July 9, aged 62.

GEORGE C. BURTON, M.D., Louisville Medical College, 1882, of Washington, D. C., a member of the Medical Association of the District of Columbia, died at his old home in Mitchell, Ind., July 22, from cerebral hemorrhage, aged 52.

M. M. ADAMS, M.D., of Greenfield, died at his home Aug. 4, 1909, of ptomaine poisoning, at the age of 74 years. Dr. Adams was one of the oldest physicians in Hancock County, having a large practice at the time of his death.

The following resolutions regarding his death were passed by the Hancock County Medical Society:

Resolved, That in the death of Dr. Adams there has ended all too soon a career full of well rounded achievements, and there has gone from us a personality quite unique, for there was no one like Dr. Adams in his qualities as a doctor, a man and companion.

Resolved, That in the death of Dr. Adams we have lost a man of exceptional ability in the practice of medicine in the highest sense; that he always stood for the best and purest, both in his private and professional life.

Resolved, That he was always kind and attentive; that no one called on him without receiving a response, and that he was not only a man beloved as a physician but as a true friend to his patients. He was especially kind to the younger men of the profession, always willing and able to help them with good and wholesome advice; encouraging them to live up to the highest and purest. Be it further

Resolved, As physicians that we will emulate his virtues and cherish his memory.

NEWS, NOTES AND COMMENTS

DR. W. A. HULBUSH, formerly of Fort Wayne, has located in Hobson, Mont.

DR. T. C. LOUIS, formerly of Prairieton, Ind., has taken up practice in Seeleyville, Ind.

DR. MINIETTA HERVEY, physician for the Home for the Friendless, Richmond, has resigned.

DR. D. V. McCLEARY, of Dale, Ind., left September 1 for a five weeks' trip in California and Seattle.

DR. J. C. BLOSSOM has moved from Mt. Summit, Ind., to 200 Richmond avenue, Richmond, Ind.

DR. JOSEPH RILUS EASTMAN has recently returned from a two weeks' visit in New York and Philadelphia.

DR. GEORGE D. KAHLO, president of the Indiana State Medical Association, returned home from his European tour September 14.

DR. MURRAY HADLEY, of Colorado, has opened up an office at Thirty-Fourth street, Indianapolis.

DR. JAMES W. BAXTER, formerly of Lanesville, Ind., has taken up practice at 216 West Market street, New Albany, Ind.

DR. T. C. KENNEDY has changed his office from the Newton Claypool building to suite 805 Odd Fellows' building, Indianapolis.

DR. WALTER BAKER, of South Bend, has been selected to take charge of the Anti-Tuberculosis Society's Fresh Air Colony at Pottawattomie Park.

DR. R. H. RISSSLER, who was formerly superintendent of the State Laboratory of Hygiene, is treating the natives of Albay, Luzon, for hookworm.

THE Miami County Medical Society will resume its regular monthly sessions September 24, when Dr. Fretz, of Deedsville, will present a paper on "Infant Feeding."

DR. FRANK H. FOSTER, a valued member of the Kosciusko County Medical Society, has moved from Warsaw to New Carlisle, Ind., where he has taken up practice.

DR. J. F. SILER, Medical Corps, U. S. Army, and chief of Department of Tropical Medicine in the New York Postgraduate Medical School, has been sent to Peoria, Ill., to investigate the recent outbreak of pellagra.

DR. H. D. MCCORMICK resigned his position September 1 as house surgeon in the Wabash Railroad Hospital, at Peru, Ind. He will locate in Vincennes and enter private practice. Dr. S. K. Ingle, of Boonville, Ind., will succeed him as house surgeon.

SINCE the publication of our August number the Council on Pharmacy and Chemistry of the American Medical Association has acted on the following products: Articles accepted for N. N. R.: Perogen Bath (Morgenstern & Co.). Articles accepted for N. N. R. Appendix: Tablets, Atoxyl and Iron (Sharp & Dohme).

DR. CHARLES H. McCULLY, of Logansport, Second Vice President of the Indiana State Medical Association and Councilor of the Eleventh District, and Miss Florence Vernon, of Huntington, were united in marriage September 1. They will be at home after October 1 at 421 Fourth street, Logansport, Ind.

FOUNDER'S DAY was observed at Dr. Fletcher's Sanitarium Aug. 18, 1909, in commemoration of the life and work of Dr. William Baldwin Fletcher, who was born Aug. 18, 1837, and died April 25, 1907. The annual graduating exercises of the training school for nurses of this sanitarium were also held on the evening of the same day.

THROUGH an error in the copy submitted last month the new medical organization recently effected in Cincinnati was stated as having adopted the name of "Daniel Drake and His Following." This is the title of the book by Dr. Juettner, but the correct name of the society is "The Drake Memorial Association."

DR. HELENE KNABE, one of the women physicians of Indianapolis, has been appointed secretary for Indiana of the National Public Health Educational Committee, which was created at

the last meeting of the American Medical Association. Her work as Indiana secretary will be principally among the women. For several years Dr. Knabe was assistant superintendent of the Department of Bacteriology and Pathology in the Laboratory of Hygiene.

DR. H. E. BARNARD, chief of the Food and Drug Department of the State Board of Health, had charge of the convention of market, milk and butter men, which met at the State House September 7 and 8. Dr. Barnard had on exhibition at the State Fair grounds a carcass of a tuberculous cow as an object lesson to the milk and butter men of what may be the condition of a tuberculosis animal while appearing in normal condition of life.

The following persons accepted invitations to speak to the convention: Dr. Mazyck P. Ravanel of the University of Wisconsin; Dr. W. H. Evans, Health Commissioner of Chicago, who has been active in obtaining better milk conditions in that city; Ivan C. Weld, of the Bureau of Animal Industry of the Department of Agriculture, Washington, D. C.; John Prescott, of Indianapolis, formerly market milk inspector of Massachusetts, and John Owens, one of the inspectors of the Indianapolis State Board of Health, who used some new lantern slides in showing dairy conditions as he has found them in Indiana.

THE Jennings County Medical Society has passed the following resolutions concerning life insurance examination fees:

Resolved, That in the future the members of this society charge a flat fee of \$5.00 for each and every examination of life insurance for all Old Line Insurance companies.

The secretary of the society, in notifying doctors of the county concerning the matter, has the following to say: "We have every reason to believe that the members will adhere strictly to this fee, as it is only a reasonable compensation for work requiring a scientific training and a mature judgment to do justice to the applicant and to the company. If there is anyone who does not consider his services worth as much to the company, we trust he will refuse to make an examination rather than do a man's work for a boy's wages.

THE postal authorities have issued a fraud order against Dr. Bye and Dr. Leach of Indianapolis. For many years Dr. Bye has advertised

a combination oil-cure for cancer. One of the postoffice inspectors secured some of the oil and had it analyzed and it was found that it was composed of cotton-seed oil, with a few simple ingredients. Not only have many people afflicted with cancer been deluded, but also many who had simple ailments, which were called cancer by these men, suffered a depletion of their pocketbooks, as well as their health, by these methods. It has been only a year ago that a physician in Tennessee wrote to *The Journal of the American Medical Association* about a case in which a woman lost her life through the use of the combination oil-cure. Within the past year *Collier's Weekly* has published an exposé of their methods. It is hoped that the fraud order will stand, as this has been one of the most glaring of the advertising frauds.

Many Indianapolis physicians have endeavored to renew their health, as well as to increase their enjoyment of life, by taking long vacations this summer. Dr. J. F. Barnhill was in Colorado and Arizona and the Yosemite Valley; Dr. Theodore Potter had a pleasant summer in Laggon, Canada; Dr. Samuel Johnson at the sea coast; Dr. J. E. Crose in Denver; Drs. H. K. Walterhouse, J. R. Thrasher and Paul Coble in a camp on Fall Creek, North Indianapolis; Dr. and Mrs. Freeman Hibben at Marblehead Neck, Mass.; Dr. John A. Sutcliffe on a farm near Connersville; Dr. Bernays Kennedy at Charlevoix, Mich.; Dr. E. D. Clark at the Alaska-Yukon Exhibition in Seattle, later in Alaska; Dr. and Mrs. G. E. Hunt, Seattle and Old Point Comfort; Dr. and Mrs. J. M. Hurty at Odon, Mich.; Dr. E. D. Wales in Boston; Dr. and Mrs. T. Delaas in Ohio; Dr. O. M. Torian in Sewanee, Tenn.; Dr. D. L. Kahn at the St. Clair Flats, Mich.; Dr. L. F. Page at Cape Cod; Dr. W. B. Robinson in Ohio; Dr. Norman E. Jobes in Maxinkukee; Dr. Rebecca George in Michigan; Dr. H. C. Sharp has been spending his weekends at Jeffersonville; Dr. J. J. Boaz, John W. Sluss, Homer I. Jones and C. B. Gutelius in Wisconsin; Dr. T. C. Hood in Colorado; Dr. J. A. Ford and Allison Maxwell in the East; Dr. Frank Allen and Dr. E. O. Lindenmuth in Wisconsin; Drs. H. C. Kimberlin, W. N. Wishard, John J. Kyle and T. A. Wagner and son in Europe; Dr. Eugene Beuhler and Dr. T. B. Noble in fishing trips in the North; Dr. John H. Oliver on his farm near Indianapolis; Dr. Herbert Woollen touring Canada in his automobile; Dr. Frank Wynn on the Atlantic coast.

SOCIETY PROCEEDINGS**ALLEN COUNTY.****FORT WAYNE MEDICAL SOCIETY.**

(Meeting of June 22, 1909.)

The society met in regular session in the assembly room with twenty-five members present. Minutes of previous meeting read and approved.

Clinical case reports. Dr. E. J. McOscar reported a case of rupture of sphincter ani of four years' duration. He said it is a good plan to try to restore these muscles even though they have gone for a long time.

Dr. B. Van Sweringen reported a case of appendectomy where a great quantity of serum was found in the belly. There was a band from bowel to mesentery under which a loop of the bowel had become strangulated, forming a black mass. Symptoms of ileus lasted only part of a day. Case is doing nicely following operation.

Dr. Porter reported a case of acute pancreatitis, which was interesting because of sudden onset and rapidity. It is the second case of acute pancreatitis he has seen in his practice. If these cases are to be helped at all, prompt celiotomy must be employed. Patient, man, aged 70, with previous history of remarkably good health. No stomach or bowel symptoms. Had sudden severe pain in epigastrium, vomiting followed by copious stool. Vomited about one pint of clear blood, later coffee ground. On visit found the man moribund and refused to operate, as he was about to die. Much distended belly, nausea and vomiting. Was particularly tender in epigastrium and right hypochondrium. Made diagnosis of perforating gastritis, duodenal ulcer, or acute pancreatitis. Saw patient about midnight and he died at 4 a. m. Post-mortem report: Upper five feet of intestine filled to distention with blood. Pancreas presented evidence of acute inflammation and cheesy like deposits. Acute pancreatitis.

Several reports were given from the A. M. A. meeting.

Dr. C. E. Barnett gave a report from the American Urologic Association, which held its eighth annual meeting at Atlantic City, June 7 and 8. The association is composed of about four hundred surgeons of North America who specialize in urogenital and gynecological surgery.

The first symposium, "The Seminal Tract," was led by Belfield, of Chicago, the president, on "Vasostomy for Male Pus Tubes." He was followed by Edward Martin, of Philadelphia, on "Epididymovasorraphy." Eugene Fuller, of New York, gave a summary of his experience in "Vesiculotomy." Dr. Barnett presented a paper, "The Seminal Vesicles," giving some research work from a surgical standpoint.

Symposium on the "Prostatic Region." Hawkins, of Pittsburg, gave some interesting work on the "Veru Montanum."

Five new instruments were demonstrated, among them one by Hugh Young, for operative cystoscopy, in which the Freudenberg principle was used for the introduction of the lens which illuminated an indirect field in which his instrument was applicable for biting off the growth and delivering it.

Symposium. "Contaminated Secretions from Vesicle and Prostate." Wolbarst, of New York, gave some valuable research in that line.

Symposium on "Vaccine and Serum Therapy." The points brought out were that autogenous serums and vaccines were better than stock mixtures, that the gonococcus grew best in hydrocele and acitic agar, and Schmidt, in an extensive paper on the use of "Gonorrhreal Vaccines and Sera in Joint Involvements," concludes that bacterines are best in chronic infection and the sera in acute cases.

In a symposium on "Hematuria," MacGowan, of Los Angeles, gave a masterly paper on the "necessity sometimes of opening the kidney and ligating the bleeding papillæ."

Bransford Lewis, in a symposium on the "Bladder," demonstrated some advanced work in ureteral surgery through the cystoscope by way of the bladder.

In the "X-Ray Symposium," Cunningham, of Boston, exhibited x-ray plates illustrating stilted ureteral catheter shadows differentiating, like Fenwick, of London, the extraneous extra-ureteral shadows. Bevan, of Chicago, showed some interesting x-ray plates, one of them being a horse-shoe kidney calculus shadow.

The last symposium, "Hydronephrosis," was led by Harris, of Chicago, who advocated suspension as the best treatment. Mayo, of Rochester, spoke of the possibility of anomalous vessels being the etiologic factor, but the discussion brought out the fact that the fascia in which the vessels ran was most likely the cause, and a liberation of the binding of that fascia would relieve the hydronephrosis. Kelly, of Baltimore, gave a most beautifully illustrated paper of his treatment of quilling the pelvis of the kidney in hydronephrosis.

This closed the most successful meeting in the history of the association.

Dr. G. B. M. Bower gave a report from his sojourn in Utah and said that if a man wishes to take out a license in Utah it behooves him to be in good standing in his county society. The profession in Utah are wide awake.

Committee on certificates to prostitutes reported as follows:

To the Fort Wayne Medical Society:—We, your committee appointed to investigate and report on the charges that members of the Fort Wayne Medical Society were giving certificates of freedom from venereal disease to prostitutes, beg leave to report that we have found that certain members of this society have been found to have furnished these certificates. The names of these members are in the hands of the secretary of this society. Your committee desires the society to place its seal of condemnation on this practice and therefore offers the following amendment to the by-laws: Any member found guilty of furnishing a prostitute with a certificate showing freedom from venereal disease shall thereby forfeit his membership in the society.

[Signed.]

MILES F. PORTER,

A. P. BUCHMAN,

B. VAN SWERINGEN,

EDWARD J. MCOSCAR, Committee.

Dr. Weaver made a motion that the report of the committee be adopted and the committee discharged. Seconded.

In the discussion Dr. W. W. Barnett said he thinks that the interests of the community would be furthered by examinations of prostitutes. He said that a prostitute controlled is much better for the community than one unexamined. He thinks prostitution cannot be done away with. He objected to adoption of such a by-law as proposed. Drs. McOscar, Bower, Squires,

Weaver and Havice also discussed the subject. Motion put and carried. Dr. Weaver presented the following:

Resolved, That Section 7 of the by-laws shall be amended by the insertion after the word "offense" of the following clause, "or who is found guilty of furnishing a prostitute with a certificate showing freedom from venereal disease."

Adjourned.

J. C. WALLACE, Sec.

KOSCIUSKO COUNTY.

The regular meeting of the Kosciusko County Medical Society was held August 31. The minutes of the previous meeting were read and approved.

Etiology, Diagnosis and Treatment of the Various Headaches, was the title of a paper by Dr. L. W. Ford, of Syracuse. In the discussion which followed, President C. W. Burkett brought out the danger of giving hypodermics of morphin to relieve headache, in view of the liability of contracting the habit. Dr. C. N. Howard, of Warsaw, spoke of the headaches due to eye-strain. In his own experience he had tabulated fifty patients who had come to him to have their eyes examined for glasses, and who were bothered with headaches. Most of the examinations included the use of the retinoscope at one-half meter distance, with the eyes under the effect of homatropin. Glasses were ordered for all of this particular set of fifty patients. After wearing the glasses for two weeks or more, 6 per cent. had the headaches made worse, 6 per cent. noticed no difference in the headaches, and 88 per cent. had the headaches either partially or entirely relieved. Dr. C. R. Long, of Pierceton, spoke of the value of large doses of quinin in what patients sometimes call "sun" headaches; that is, in those malarial headaches which begin about eight in the morning and run until some time in the afternoon. He uses twenty grains of quinin in practically one dose, that is, a patient getting it all in at least about the space of an hour. Dr. Long also spoke of the frequency with which headache was associated with uterine displacement.

Diagnosis and Treatment of Neuralgia was the title of a paper by Dr. W. L. Hines, of Warsaw. In the discussion Dr. Anglin spoke of the value of making an accurate diagnosis where there was a question of neuralgia. Dr. P. G. Fermier, of Leesburg, described a case of intercostal neuralgia in which there was finally a breaking out of vesicles creating a real herpes zoster. Dr. C. C. DuBois, of Warsaw, spoke of the value of aspirin in neuralgia. He also spoke of attending an autopsy in Cincinnati, in which the cause of death was headache tablets. He understood that there were about eight deaths a year in Cincinnati from the use of headache tablets. Dr. L. W. Ford described a personal experience where he had had intercostal neuralgia associated with gastritis. Dr. T. J. Shackelford, of Warsaw, described a case of neuralgia of the heart accompanied with nephritis, which an osteopath had said he could materially aid, though the patient

was practically dying at the time and did die very shortly.

Etiology, Diagnosis and Treatment of Neurasthenia was the title of a paper by Dr. G. W. Anglin, of Warsaw. In the discussion which followed, Dr. Hines spoke of two or three cases which had come under his observation, in which neurasthenic patients had had their minds progressively weakened or distorted until one of their convictions was a refusal to accept food. They were apparently trying to starve themselves to death. After they had thus voluntarily instituted starvation for a short time they began to get better and finally began eating again, eventually arriving at perfect health in mind and body.

The following resolutions regarding Dr. Kemper were unanimously passed by the society:

WHEREAS, The "Sketches of the Medical History of Indiana," which are being published in our state journal, are the work of Dr. G. W. II. Kemper, of Muncie, Ind., and

WHEREAS, Those sketches are of interest and value, and their preparation entails not only considerable work but requires literary ability and judgment, be it

Resolved, That the society extend to Dr. Kemper this acknowledgment of their appreciation of the good work he is doing for the profession, and be it further

Resolved, That one copy of these resolutions be sent to THE JOURNAL and one to Dr. Kemper.

Adjourned.

C. NORMAN HOWARD, Sec.

PIKE COUNTY.

The Pike County Medical Society met in regular session at the office of Dr. Kime, August 12, the vice-president presiding. The minutes of the previous meeting were read and approved. The committee appointed to draft resolutions regarding pauper and contract practice and insurance examinations could not agree and was continued for future report.

Enteric Fever was the title of a very interesting paper by Dr. Rice, in which many valuable suggestions concerning the treatment of this condition were offered.

Dr. Abbott reported a very peculiar case to the society which presented a decided nervous temperament, and perhaps some obscure organic involvement.

Dr. Kime gave a very interesting talk on surgery. At the close of the meeting refreshments were served.

Adjourned.

E. S. IMEL, Sec.

PORTER COUNTY.

The Porter County Medical Society held its regular meeting August 8, with President Powell in the chair.

On motion, Dr. Blount, of Valparaiso, was elected delegate to the state society and Dr. Carson, of Valparaiso, alternate.

Pneumonia was the title of a paper by Dr. Carson, in which he discussed the general management of this disease. General discussion by the society followed.

Adjourned.

G. R. DOUGLAS, Sec.

THE JOURNAL

OF THE

INDIANA STATE MEDICAL ASSOCIATION

DEVOTED TO THE INTERESTS OF THE MEDICAL PROFESSION OF INDIANA

ISSUED MONTHLY under Direction of the Council

ALBERT E. BULSON, Jr., B.S., M.D., Editor and Manager

BEN PERLEY WEAVER, B.S., M.D., Assistant Editor

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NUMBER 10

ORIGINAL ARTICLES

THE ART OF MEDICINE.

PRESIDENTIAL ADDRESS

GEORGE D. KAHL, M.D.
FRENCH LICK, IND.

Medical science probably has made greater advances within the past two or three decades than during as many centuries preceding this period, and I am but doing justice to the members of this Association when I say that they have always represented an influential element in this progress.

The contributions of scientific research, particularly in the field of physiology, pathology, bacteriology and chemistry have given us an insight into the causes and nature of disease scarcely dreamed of a generation or two ago.

Modern sanitation practically has eradicated diseases which in former times were considered the greatest of human scourges, and is each year lowering the death rate from contagion of every description. Diagnosis, in the hands of the skilled practitioner, is rapidly approaching an exact science, and the achievements of surgery, as well as in some departments of medicine, have excited universal admiration.

With such a record of scientific progress, it would seem that the educated, experienced physician of to-day stood in an enviable position, both as regards the performance of his professional duties and the meriting of public confidence. In large measure this is true; yet when we observe the widespread tendency on the part of an otherwise intelligent public to self-treatment and to the acceptance of occult doctrines which call into question both the value of our scientific work and our competency to practice the therapeutic art, even more, the very existence of

disease itself, it is well that we give some thought to the influences that have contributed to such conditions. A very astute student of human nature once observed that "people liked to be humbugged and the bigger the humbug, the better they liked it." Perhaps this may in part account for the tendencies referred to. If the price paid for such indulgences were to be measured by mere pecuniary losses to the individual and to the medical profession, there would be little need of our giving the matter serious consideration. It is, however, an attack upon the very principles on which medical science and art have been built; more important still, it can but result in much needless suffering and the actual sacrifice of human life.

I do not mean to imply that no good whatever can come out of such practices, for if they were without any redeeming features, they could scarcely have exercised such an influence upon public opinion. Their greatest danger is in their indiscriminate use and in the relegation of the therapeutic art into the hands of self-appointed individuals whose experience and calling ill befit them for work of this character.

I shall not attempt to elucidate this subject in all of its phases. I wish merely to point out a few influences which seem to be the most important.

First and foremost, perhaps, has been the education of the public in matters pertaining to our professional work in order that we might better safeguard its interests by an intelligent cooperation in the application of measures which science has taught us are essential in the prevention and cure of disease.

As a net result of these efforts, we have had the satisfaction of seeing enacted many judicious medical laws that have been of incalculable benefit in public sanitation. We have obtained appropriations for the erection and maintenance of

institutions for the study of disease and the rational treatment of the sick. Moreover, we have driven from our midst the ubiquitous and conscienceless quack who for so many years was allowed to flourish because of the lack of such knowledge. We have, however, by the same means, lost to a certain extent some of our erstwhile prestige as exponents and practitioners of the medical art. Our patients either treat themselves, seek advice from the apothecary or are cajoled into the belief that those who minister unto the soul are equally competent to treat the sick. It must also be confessed that the present attitude of the public mind is in part due to the fact that scientific developments of recent years have so opened our eyes to the possibilities of prophylaxis that our attention, to some extent, has been diverted from the actual treatment of disease to its prevention. We have been educating men of science whose natural tendency is to become laboratory experimenters, investigators and diagnosticians rather than practical clinicians. No sensible person will question the value of such knowledge as a basis for an intelligent appreciation of the problems involved in treatment, and the man who is sick may be interested to know something of the pathology of his condition as well as the particular influences that have produced it, but what concerns him a great deal more is what is to be done for his relief.

We may learnedly expatiate upon questions of differential diagnosis and may even convince our patient that the application of the most obvious rules of health might have prevented these things, but if our interest does not go beyond prescribing something for the amelioration of his most distressing symptoms and a few directions bearing upon the principles to be applied toward his ultimate cure, the exact nature of which seem to him as obscure as the uncertainty of his recovery, we can hardly blame him if he loses confidence in our ability as practitioners of medicine, even though he may still retain the most profound respect for our erudition.

Another factor has been the belief, more or less generally current, that medical practice is still based largely, if not solely, upon a system of drug administration. Happily, this is no longer the case, for we have come to a better understanding of the influences by which the human organism is endowed with certain natural forces of immunity and repair, and are able to utilize these same influences in favoring Nature's efforts. A symptom, which to the casual observer might seem to be an indication for treatment, may, and very frequently is, in the eyes of

a skilled clinician, a salutary influence. Hence, good judgment is as often required to determine when to withhold a remedy as when to use it.

Drugs are to-day just as useful in the treatment of disease as they have ever been, and a great deal more so, for not only have there been many valuable additions to our armamentarium in this as in other particulars, but we have learned to employ them with much greater discrimination. The reason that physicians of the present day use less medicine than their predecessors is not that they have lost faith in its efficacy, but that they have other resources that are often of much greater value. In many conditions drugs are still our most trustworthy agents, both in the relief of symptoms and in the cure of disease, but the physician who does not recognize their limitations for good as well as evil and continues blindly to adhere to the venerable but altogether antiquated and unscientific practice of treating disease by drugs alone, is a menace both to scientific progress and to the community in which he practices.

Finally, there is the fact that with the evolution of modern civilization the nature of disease itself has changed and is constantly changing. We are no longer called upon to deal with great epidemics of contagion, nor do we often see infections of the same virulence as prevailed when mankind lived under less hygienic conditions, but in their stead has come a multiplicity of functional derangements involving digestion and nutrition, as also the neuroses and psychoses incident to the stress and luxury of modern life.

No sooner have we obtained a mastery of one class of diseases than we are called upon to battle with the intricacies of another. We must devise new methods to meet new conditions and until such methods become perfected, there are naturally differences of opinion as to which is best. It is, therefore, not surprising that we should find the same lack of unanimity in the beliefs of those who seek advice upon such subjects.

Many other factors might be cited in explanation of the influences that mould medical practice at the present time, and I perhaps may have attached undue importance to those already referred to, but enough has been said, I believe, to impress upon my professional hearers the wisdom of giving this subject some consideration. I hope, also, to convince the more skeptical among my lay audience that modern medicine stands for something besides the routine dispensing of drugs.

We cannot correct the conditions adverse to medical progress by villifying those who seek to disparage our efforts, nor by harsh criticism of theories advanced in support of their arguments. Despite all our scientific achievements, medicine is still an art rather than a science, and will continue to be so long as people are differently constituted and there are such manifold influences to impart protean characteristics to disease. Many who are unwilling to accept our conclusions are as ardent seekers after truth as we are and are actuated by the same humane impulse. Even though our contentions upon matters scientific may ultimately reach the plane of accurate and unanswerable demonstration, there will still be room for honest differences of opinion upon questions of treatment. Herein lies one of the chief fascinations of our profession.

Credulity is never more manifest than when we are sick, and however we may argue to the contrary, it must be admitted that psychic influences play an important rôle, both in the causation and the treatment of disease. If scientific medicine is what we claim it to be, namely, a system of treatment that is eclectic in its broadest sense, let us not trammel it with restrictions which demand actual proof of the *modus operandi* of treatment and impel us to employ only such remedies as are clearly beyond the pale of empiricism. To attempt to treat a condition that is purely psychic by psychical means is just as illogical as to rely upon mental healing for the relief of physical ailments. The most practical psychologist is not always the most successful physician, but we find few exceptions to the rule.

It is just in these borderland cases that modern therapeutics afford opportunities for the most brilliant results. It is here that the personality of the physician, his integrity, sympathy, watchfulness, his ability to recognize the true nature of the condition present and to retain the confidence of his patient by simple attention to details count most for success.

Physicians are not all alike in the possession of those inherent qualities which best fit them for the practice of their profession, but much can be accomplished by proper training. If one is by nature an investigator, he would better confine himself to such fields of work. If he has no special predilection in this direction, his time will be better spent in the cultivation of the art of diagnosis and treatment, either surgical or medical, as his inclination or opportunity may suggest. If he is merely seeking an occupation, he

can, by the expenditure of the same amount of time and energy, qualify himself for other pursuits which are likely to prove less exacting, more remunerative and much more satisfying to his conscience.

This is an age of specialism and rightly so, for medical science is too broad in its scope to be mastered by one man, no matter what his intellectual endowments may be or how diligently he may apply himself. We cannot graduate specialists, even though we continue to raise our standard of preliminary requirements and extend our medical course. Specialism should be a process of evolution—not of selection, and it is a debatable question whether we are not already devoting too much time to theoretical preparation. Medical science can be taught, but medical art, being an adaptation of scientific means to practical ends, can only be acquired by experience and observation.

The time has come, it seems to me, when we can with advantage modify our medical curricula by a further subdivision and strengthening of the departments of therapeutics and clinical medicine. A certain amount of laboratory training is not only desirable, but essential to the proper understanding of the nature of disease, but we should impress upon the student more and more that the ultimate aim of all scientific research is the prevention and cure of disease. Furthermore, he should be given more detailed instruction in the art of practice, particularly in such branches as climatology, hydrotherapy, electrotherapy, psychotherapy, mechanotherapy and dietetics, which are to-day of such great importance in the practice of internal medicine. By enlarging the scope of these departments, we shall minimize the tendency to too close adherence to the principles of *materia medica*. Obsolete remedies should not even be referred to, as they only tend to confuse the young practitioner in the choice of newer and more reliable agents, the administration of which in common with all other measures of therapeutics, should be taught with a due regard to their practical application. And the time when such instruction should be given is in the junior and senior years instead of at an earlier period. We cannot know the art of treatment when we have but a meager conception of its clinical indications. Knowledge thus acquired is not wisdom, and is usually soon forgotten.

A correct observation of clinical symptoms is of much greater importance than microscopic or

chemical findings in making a diagnosis, and the effect of such natural remedies as air, water, exercise, rest, cheerful surroundings and an optimistic attitude of mind are often more potent for good than the introduction of substances foreign to the organism or the removal of parts that may be considered more or less unessential to it.

The whole aim of surgery is therapeutic results. It is an art, the mastery of which requires much painstaking effort and experience. Is the treatment of a disease of the stomach, of the kidneys, a malnutrition, or a psychosis less of an art than the amputation of a finger or even of an abdominal section, and are we, as physicians, no better qualified to undertake the management of such conditions than the manufacturing pharmacist, the chemist, the masseur, or the clergyman? Do we owe no debt of gratitude to our predecessors, even though their successes have been largely the result of empirical experience?

The criticism that we are sacrificing our art on the altar of science is, to some extent, not unjust. Fortunately, it applies only to the few, but if we are to continue to educate scientists instead of practical physicians, we may gain for our posterity much honor and respect, but it will fail to receive that gratitude and affection which only comes with sympathetic, careful, clinical observation and constitutes the physician's greatest compensation.

Medicine is no longer shrouded in the mystery of former years. We are dealing with an enlightened people, who rightly expect a higher standard of scientific attainment. They do not ask that we shall at all times be able to express positive opinions upon questions of diagnosis or prognosis, but they do demand a treatment that is purposeful, painstaking in detail and fruitful in therapeutic results, no matter from what source or reasoning it may be derived. There is but one thing that is better calculated to discredit medical art than the pretensions of those who are ignorant of its scientific principles, and that is a treatment that is so narrowed by orthodoxy and so hampered by scientific prejudice that it is lacking in that most valuable of all good qualities, common sense. If the practice of medicine is to keep pace with surgery, the art of treatment must not only be cultivated, but its importance emphasized. Then, and then only, will medical treatment be in the hands of competent, conscientious, practical men, and the sophistries and blandishments of charlatans, patent-medicine vendors and pseudo-scientists of every description will appear in their true light.

HEREDITY AND DISEASE.*

JOSEPH COLLINS, M.D.
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Mr. President, Ladies and Gentlemen:

The subject that I have selected to discourse upon this evening cannot fail to interest every one who takes an interest in human life. It is such common-place knowledge that each variety of plant and animal has the capacity to reproduce itself that no one gives it concern; and that a human being should inherit the form, traits and qualities of the stock from which he proceeds is considered to be "natural." That man is a product of evolution is now a part of the intellectual creed of educated men and women, and his attainment of the position in the scale which he has reached is generally believed to be due largely to selection, natural and sexual, and to adaptation. Although these forces have not ceased to operate, modern civilization and humanitarianism have cramped the action of natural selection, and, so far as we have data for comparison, the human race, from the point of view of evolution, has ceased to progress. If there is to be a Renaissance, it must be through the aid of factors and forces that do not violate the tenets of humanitarianism. The only practical way in which this can be done is to discover the laws that govern the primary factors of evolution in the human race: that is to say, the principles underlying variation and heredity.

It seems to me that the physician has unique opportunities for doing this, and my principal object in bringing this subject before the members and guests of this State Medical Society is that I may, by presenting some of the conclusions of recent work along these lines, prompt you to reflection upon this subject, and perhaps to contribution toward the solution of some of its problems. Our present knowledge of heredity is due largely to the investigations of botanists and zoologists. Physicians have neglected it in an astonishing way.

No one can practice the branch of our profession in which I am particularly interested without soon realizing that the most important factor with which he has to deal in his effort to interpret disease, and to thwart it, is heredity, and he is soon made to feel that what is known about it is meager and indefinite. It is this paucity of knowledge concerning the science which deals with the organic relationship of progenitors with descendants that emboldens me to ask your earnest consideration of the subject. To simplify the

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presentation of the matter, I shall speak of it under four headings.

First, the meaning of heredity, which necessitates mention of the theories of the science. *Second*, the appearance of inborn diseases; that is, of diseases dependent solely, as far as we know, upon heredity, and particularly diseases of the nervous system. *Third*, the opportunity which physicians have to acquire information of the ways in which the resemblances between parent and offspring are perpetuated from one generation to another, and to disseminate a knowledge of the principles of heredity, and, *fourth*, a plea for the appropriateness of our becoming students of the science of Eugenics.

The attitude of the physician of to-day toward disease is, I take it you will all grant, a very different one from that of even so short a time as a generation ago. Ambrose Paré said he dressed his patients' wounds and God healed them. Doubtless the saying did not originate with him; and many similar sayings could be called from the writings of physicians since his time which set forth belief in the small influence that the physician has to cure disease. But our actions have belied this statement. Even to-day I fear that we administer medicines as if we believed they were competent to cure disease.

The future work of medicine is mainly to fore-stall disease and to prevent functional disorders from jeopardizing the victim's usefulness. Preventive medicine is busy almost exclusively in one field: circumventing the development and growth of low and high forms of vegetable and animal life, parasite, microbe, fly and mosquito. The decrease in communicable diseases testifies to the physician's efficiency. The predisposition to disease is not so important a factor as the exciting cause of the disease, but to obviate predisposition or tendency to disease is frequently tantamount to preventing disease, and that such predisposition exists, call it manifestation of heredity or call it any name we will, no one, I take it, denies.

THEORIES OF HEREDITY.

The physical basis of inheritance I need not say to you is the fertilized ovum. The way in which it develops, one step conditioning the other, is the story of heredity. What is the organization and potentiality of this fertilized ovum and what are the factors that condition its development? To answer this, various theories of heredity have been propounded. Stated briefly, these theories are:

1. The theory of Darwin, which is based upon the hypothesis of pangenesis (all-production). This implies that every part of the whole organi-

zation reproduces itself. So that ovules, spermatozoa, and pollen grains—the fertilized eggs or seeds as well as buds—include and consist of a multitude of germs thrown off from each separate part or unit.

2. The theory of Cope (often spoken of as the theory of Haeckel) or of perigenesis, a theory which assumes that reproduction is affected by a kind of wave motion or rhythmical pulsation of plastidules, the name given to molecules of organized living material, or vital units. According to this theory, heredity is the memory of the plastidules, variability is the receptivity of them. The first produces the stability, the second the variety of organized form. In the very simple and very constant forms, the plastidules have acquired nothing and forgotten nothing. In the very much developed organic varieties, they have acquired much and forgotten much.

3. The theory of Weissman, or of continuity of the germ plasm. According to this theory, heredity is affected by an extremely fine and complex substance possessing determining molecular and chemical properties which transmit themselves without modification from generation to generation. When a new organism develops, a part of this plasm is maintained in reserve to form the germinal cell. They thus pass in direct non-interrupted continuity from generation to generation. The germ cells are endowed with a potentiality for variation within certain limits, which can be called out, by an appropriate environment. Weissman suggests that oscillation of nutrition in the soma plasm may cause variation in the germ plasm, and if this can be demonstrated it gives a working hypothesis of heredity and disease. When we speak of germ plasm, we must constantly keep in mind that the conception of it is hypothetical. We may like to believe that it has a physical basis in the chromosomes of the nucleus, but we cannot prove it.

THE LAW OF ANCESTRAL INHERITANCE.

The next most important thing to remember in contemplating the laws of heredity is that the initial heredity is dual, one-half coming from each parent, and that it is multiple from the ancestors. From a study of this dual and multiple inheritance, Francis Galton, an eminent English biologist and first cousin to the immortal Charles Darwin, formulated the law of ancestral inheritance, basing it upon a study of the inheritance of the human faculties and on a series of studies on Basset hounds. This law is: "The two parents between them contribute on the average one-half of each inherited faculty, each of them contributing one-quarter of it. The four grandparents

contribute between them one-quarter, or each of them one-sixteenth, and so on, the sum of the series $\frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \frac{1}{16}$, etc. = one, as it should be. It is the property of this infinite series that each term is equal to the sum of all those that precede; thus $\frac{1}{2} = \frac{1}{4} + \frac{1}{8} + \frac{1}{16}$, etc.; $\frac{1}{4} = \frac{1}{8} + \frac{1}{16}$, etc. The prepotencies or subpotencies of particular ancestors in any given pedigree are eliminated by the law, which deals only with average contributions, and the varying prepotencies of sex in respect to different qualities, are presumably eliminated.

Knowledge of the law of ancestral inheritance has been widely disseminated by Karl Pearson, who may be called the father of biometry, the science which deals with its application. Although the correctness of its fundamental principles have been denied, and although its applicability is in conflict with the Mendelian hypothesis, the most promising key to the riddle of heredity, every one admits that investigations undertaken to prove its justness and truth have yielded valuable, incontestable results, such as the hereditability of character, ability, morality and the other adornments of Nature's masterpiece.

MENDEL AND HIS LAW.

The most important contribution that has ever been made to the science of genetics, the study of the hereditary phenomena of organisms, is a paper published by Gregor Mendel, an Austrian priest and abbot of the Augustine Convent of Brunn. Working in the garden of his convent, he made observations that permitted him to formulate a law which has to-day revolutionized the principles of fertilization in plants and which may eventually revolutionize our ideas of heredity in higher organisms. His paper, which was published in the transactions of the Natural History Society of Brunn in 1866, was lost sight of for many years. It was not until the principles of it were rediscovered independently in 1899 by de Vries of Holland, by Correns of Germany, and by Tschermak of Austria, that the epoch-making work of Mendel was recognized. It is particularly to Professor Bateson, of Cambridge University, that the English-speaking world is indebted for dissemination of knowledge concerning this discovery.

It is no easy matter to state intelligibly in a few words the facts upon which Mendel's law is based. Unfortunately, a few technical terms must be used. A brief description of his experiments seems to me the best way of putting his conclusions before you. Mendel made his experiments with peas, plants that habitually fertilize

themselves. He took a pair of pea plants, one tall and the other short, and crossed them. The plants that grew from the seeds obtained from this crossing were always tall; they were practically of the same height as the tall member of their parents. From the fact that this character, namely, tallness, appears in the crossbred to the exclusion of the opposite character, Mendel called it a dominant character. The dwarfness which disappeared in this generation he called recessive. Mendel then took the seeds born by the plants of the first filial generation and allowed them to self-fertilize. When they grew up they were not uniformly tall; they were mixed, like their grandparents, some being short, some being tall. But what struck him particularly was that when he counted these plants he found that the proportion of talls to shorts in this second filial generation showed a remarkable constancy, three talls to one short, or 75 per cent. dominants to 25 per cent. recessives. These plants, the second filial generation, were again allowed to fertilize themselves, and the offspring of each plant was separately sown. The offspring of this generation—that is, the third filial generation—was most interesting; the recessives were entirely recessives, while those of the dominants were of two kinds, those that in the next fertilization produced talls and dwarfs (proportion 3 to 1) and those that produced talls only, and these two kinds, impure and pure, were in the ratio of 2 to 1. This second filial generation (formed by the self-fertilization of the original hybrid) consists of three kinds of plants, 25 per cent. pure dominants, 50 per cent. impure crossbred dominants and 25 per cent. pure recessives—3 dominants, 1 recessive.

The fertilized ovum (zygote) formed by the original cross was made by the union of two germ cells (gametes) bearing tallness and dwarfness; therefore, both these elements entered into the composition of the fertilized ovum of the first filial generation, but if the germ cells which that fertilized ovum eventually forms are bearers of either tallness or dwarfness there must, at some stage in the process of germ formation, be a separation of the two characters. This phenomenon of separation is called *segregation*, and the characters that separate are called allelomorphs, and their characteristics allelomorphic. The theoretical interpretation is that the pairs of segregated characters (allelomorphic pairs) which behave in this way do not blend in the germ cell, but that each germ cell carries one or the other of these characters. The difference between a pure breed and a half-breed is that in the former all the germ cells carry one of the characters, to the complete exclusion of the other.

while in the half-breed half the germ cells carry one character, and half the other. The phenomenon of segregation, or separation, between the two characters, is the essential discovery that Mendel made, for it determines the regularity perceptible in the hereditary transmission of differences and it defines the units concerned in the constitution of the organisms.

These two characters, as has before been said, are spoken of as dominant and recessive, but, as Bateson, the most brilliant exponent of Mendelism, has pointed out, the dominancy of certain characters is often an important, but never an essential feature, of the Mendelian heredity. Dominants frequently exist, and the consequences of its occurrence must be understood if the phenomena of heredity are to be properly investigated, but it is the separation between the two characters which come in when dissimilars meet in one individual that is the essential discovery of Mendel.

RECAPITULATION OF MENDEL'S LAW.

To state this matter in its simplest scientific form, we say that when a pair of germ cells (gametes) fuse together in the process of fertilization the cell that results (zygote) when it is formed by the conjunction of two like germ cells is called homozygote. When it is formed from the conjunction of opposite members of a pair of allelomorphs it is called a heterozygote. Mendel's law, then, is that the germinal cells (gametes) of a heterozygote bear the pure parental allelomorphs completely separated from one another, and the numerical distribution of the separate allelomorphs in the germinal cells (gametes) is such that all possible combinations of them are present in approximately equal numbers.

By applying the Mendelian principles, we are able to analyze a plant into its component elements or units. In the same way, we must apply it to animal life. The different attributes, such as height, color, form, etc., are due to distinct factors which are separately transmitted. Bateson has shown that observations made by Horst on albinism, by Farabee and Drinkwater on brachydaactilia, on split hand and foot by Lewis and Embleton, and on various hereditary diseases of the skin, such as keratosis and epidermolysis, by Gossage, that the descent of these diseases follows the principle of the Mendelian dominant. And, although other less enthusiastic disciples of Mendel do not agree with him, every fair-minded person must admit that the Mendelian proportion has been worked out in so many instances that the best effort of physicians should be made to collect pedigrees of families who show any

hereditary diseases. It goes without saying that information concerning the afflicted is of no use unless it is accompanied by equally specific information concerning the non-affected of the family, as the proportion between the two is the important point. It is here particularly that the family physician has a unique opportunity to contribute to the settlement of this most vital question. If he will faithfully investigate and record the families who show any form of hereditary disease and then submit such records to men who have had competent training, mathematical or biological, to interpret them, a hundred years hence he will be in possession of the secrets of heredity as they are concealed in man. The records of hereditary disease in medical literature to-day are practically useless, with few exceptions, and largely because the search has been made for the disease under consideration in ancestor and collateral, whereas what must be done is to record the entire family and the destiny or fate of each one of its members.

THE TRANSMISSIBILITY OF ACQUIRED CHARACTERISTICS.

Formerly every one believed in the transmissibility of acquired characters; to-day few biologists admit that a character acquired by a parent can be inherited by the offspring. This does not mean that offspring may not vary from their parents, or are not born different from what their parents were at birth; indeed, the phenomena of filial regression, of variation and of reversion are among the best established facts of heredity. It is extraordinary how widespread is the belief among the intelligent lay public that acquired characteristics are hereditary, for how else can be interpreted the evidences of keenness amounting almost to a passion on every side to improve nurture. Surely we are neither hedonistic or altruistic to such an extent that we bend our best efforts to improve our own environment and that of dependents in order that we or they alone may profit. Such an attitude is inconsistent with the best objects and aims of life. When we compare what is attempted to do for nurture with what is attempted to do for Nature, we see the most startling disparity; still, the trend of safe biological teaching to-day is that we can do very little to influence the succeeding generation through nurture and that we can do a great deal by aiding Nature. Yes, I can hear some one say, "But that is flying in the face of Divinity. Nature cannot be improved; Nature can take care of herself," and similar platitudes. But what, I ask, do we physicians do in the treatment of disease save aid Nature? And we give ourselves no arrogance and her no humiliation by so doing.

Early in the last century Lamarck published a theory of evolution which assumed that all variations are due to the transmission of acquirements, and he published most elaborate proof of his claim. According to this theory, giraffes have long necks because by stretching their necks to reach food which was almost out of reach they thus initiated a minute modification of structure which their offspring inherited and gradually developed. By virtue of their fitter structure, they survived in times of want and strife; hornless ancestors of deer developed thick frontal bones and eventually horns by rubbing and butting their heads against one another in strife. The stilt-like legs of wading birds were ascribed to the result of the continued attempt of ancestors which had shorter extremities to obtain their food in shallow water without wetting their feathers. The long-continued efforts of these birds had the same effect as the similar efforts made by the ancestors of the giraffe.

The Lamarckian theory is now universally denied, though Spencer believed it to the end, and some of his arguments were never refuted during his lifetime. The question in reality is whether modifications of the body can affect the reproductive cells in such a way that the next generation will inherit some of the modifications acquired by the parents. There are a large number of facts which seem to substantiate it, but one by one they are found either to rest upon hypotheses that are untenable or they cannot be corroborated. For instance, the experiments of Brown-Séquard on guinea-pigs which seemed to show that epilepsy induced in a guinea-pig by injury occurred in the descendants of the guinea-pig, have never been properly confirmed, even though it is stated in the literature that Obersteiner and others have corroborated them. Of course, there is incontestable evidence to show that somatic modifications have enormous individual importance.

SOME HEREDITARY DISEASES.

The diseases that have been and are considered heritable are of every system of the body, but those of the muscular and nervous system and of the blood, probably of the vascular system, are the most striking. Of all these, that class of diseases which Sir William Gowers designated abiotrophies is the most conspicuous. This name is given to a class of diseases in which certain systems or structures in the nervous or muscular system or elsewhere, have an essential defect of vital endurance, in consequence of which their light slowly fails. Hereditary optic atrophy, hereditary posterior and lateral sclerosis, or Freidreich's disease, hereditary cerebellar sclero-

sis or Marie's disease, and hereditary chorea or Huntington's disease, and some of the various myopathies are the types of abiotrophies. Of all these, the strange disease of the muscles known as pseudohypertrophic paralysis is the most striking. It begins during the early years of life, rarely after the tenth year, and progresses until many of the muscles practically disappear. An uncommon feature of the heredity is that it is transmitted only through the maternal side, but they themselves (the females) rarely become afflicted with the disease. The predisposition to the disease does not exist in every ovum that becomes fertilized, but it is the rule that some of the male progeny escape.

We have not known the disease sufficiently long to trace it from generation to generation, but a number of cases are on record, such as those of Meryon and of Gowers, in which there were several instances of the disease in two generations, and there is much about the distribution of the disease to remind of the laws of Mendel.

There is another form of hereditary atrophy of the muscles in which the disease begins first in the face and shoulder. It is called the Landouzy and Dejerine type of progressive muscular dystrophy. It develops after maturity and may be transmitted by the male. A series of cases reported by these writers conforms very closely with the facts of dominants and recessives developed by Mendel. A woman suffering from the disease married a healthy man. She had one daughter, apparently normal, who married a healthy man and had three daughters, all affected. One of these married a healthy man and had two children, a girl who remained free from the disease and a son who developed it at 26. He married a healthy woman, who brought forth nine children, six sons and three daughters. Two of these died in infancy, and, of the remaining seven, four developed the disease. Thus it is that the normals of this list might be looked upon as dominants, the atrophic recessive.

PREDISPOSITION TO DISEASE AND ITS HEREDITABILITY.

The reappearance of a disease in successive generations does not prove that a disease has been transmitted. Such diseases may be accidental or they may be reactions to causes of disease that have existed in parent and in offspring. A father, son, grandson and great-grandson may die of typhoid fever, but no one would think of typhoid fever as a heritable disease. Again, a child may be born with a disease which is the result of infection during the fetal period; no one would think of calling this an inherited disease.

Then there is the condition which we are still obliged to speak of as the inheritance of a predisposition. Statistics have proved conclusively and abundantly that certain diseases, such as tuberculosis, cancer and gout—one a bacterial disease, the other a protozoal and the third a manifestation of disordered metabolism—occur more frequently in the descendants of those who have had the disease than in the descendants of those who have been free from them, and the best teaching in reference to these diseases to-day is that there is an inheritance of a constitutional predisposition. No one to-day believes that tuberculosis is heritable, but nearly every authority who has written on the matter maintains the hereditary transmission of predisposition, constitution or diatheses. The greater the opportunities for infection, the greater is the incidence and mortality of tuberculosis. Environment acts by lowering the vitality and diminishes the immunizing capacity of the individual. The infection of tuberculosis can always be effective, however, under certain circumstances, no matter what the vitality of the individual is. Dr. Arthur Latham maintained at a discussion of this subject before the Royal Society of Medicine in London Nov. 26, 1908, that the theory that there is an inherited predisposition to tuberculosis is based on insufficient evidence, although there is some evidence to suggest that the diminishing incidence and mortality of the disease may be in part due to a partial immunity inherited in the course of generations from tuberculous ancestors in which the disease had been cured.

At the same meeting Dr. Bashford, who opened the discussion on heredity in its relation to cancer, concluded that with nothing but negative evidence of the part played by inherited constitutional conditions, and with positive evidence of the important part acquired constitutional conditions can play in furthering the growth and perhaps the development of cancer, so that perhaps our time can be more profitably spent in attempting to ascertain how these diseases are acquired than in preaching the doctrine that they are inherited.

There is no dearth of evidence to show that gout is more common in the descendants of gouty ancestors than in ancestors who are free from it, and as physicians we are early made aware of the fact that perhaps the most important element in the prognosis of an attack of gout is whether or not the patient's parents suffered from similar disease. It seems probable that its hereditability is encompassed by a blastogenic variation which expresses itself in deteriorated power of resistance of certain cells or tissues which later are concerned with nitrogen metabolism.

DEGENERACY AND HEREDITY

During the past few years the general public has become familiar with the term degenerate, and it has given it, I regret to say, such connotation that to the lay mind it suggests moral depravity. Biologists and physicians, however, use the term in an entirely different sense, to indicate a striking departure from the average or normal, which departure is evidenced somatically, mentally and emotionally, but most of all in perverse psychophysical reactions. Such individuals may have difficulty in conforming to standards of morality, but as a class they are ultramoral, because they react excessively and disproportionately to fear. That degeneracy in this sense is hereditary every one whose life is spent in attempting to interpret nervous and mental diseases knows. The diseases, commonly known as neuroses of degeneracy, and particularly hysteria, epilepsy, psychasthenia and tie, are members of one family, and, like members of a family, have striking features in common. They display themselves during the formative years of life, they have no tendency to self-limitation, and they are unamenable to treatment save as their manifestations can be submerged (which fortunately is often possible) by an exalted degree of physical and mental health. They constitute the neuropathic family, and the chief factor in their occurrence is heredity.

A remarkable feature of these functional diseases of degeneracy is what may be called their interchangeability. The same neuropathic individual may have, at different periods of life, epilepsy, tie, hysteria, psychasthenia, migraine. The same tendency to interchangeability is seen in the manifestations of the neurotic instability in the ancestors. It is not certain that children of a hysterical parent will have hysteria; fortunately it is not certain that they will have any disease; but it is nearly certain, if not quite, that some of the descendants of a hysterical parent will have one or more of the neuroses or psychoses of degeneracy.

Whether occurrence of such disease in descendants conforms to the principles of Mendelian descent or to the laws of ancestral inheritance as promulgated by Galton is for future observation to decide. So far it has been shown empirically—which, it may be said in passing, experience indicates to be among the most trustworthy ways of establishing a fact—that the neuroses and psychoses of degeneracy occur preponderatingly in individuals whose ancestry shows similar disease or disorder. More than this, I think it is the consensus of opinion of neurologists and psychiatrists that the factor that influences them in venturing a prognosis concerning the outcome of a func-

tional mental or nervous disease more than all other factors is the existence of similar or comparable disease in the ancestry. When such exists, the prognosis is invariably grave.

THE ELEMENT OF HEREDITY IN THE CAUSATION OF INSANITY.

Insanity, of all the neuroses, is considered to stand in most definite relationship to pathological heredity. If we founded this statement upon statistics, it would be abundantly certified, but it is enough to say that it is supported by the expressed opinion of those who spend their lives in taking care of those who are afflicted with insanity, the vast majority of whom hold that hereditary predisposition is the chief factor in the causation of insanity.¹

It is particularly in patients afflicted with paranoia, dementia *præcox* and manic depressive insanity that a history of deviation from the average sufficient to be considered pathological, is usually found in the family. It is not contended that insanity is transmitted in the concrete; what is transmitted is instability of the neuropsychical mechanism; that is, there is an inheritance of certain mental tendencies. Rarely is any definite form of insanity directly transmitted, and it would seem that there is a tendency on the part of neuropathic and psychopathic stock, when mating with sound stock, toward progression to the normal average.

For purpose of discussion here, insanity may be classified as those forms due to infection and intoxication; organic malformation, prenatal, natal and postnatal; and those due to heredity. Psychoses due to that complex group which we call toxins are not likely to be reproduced in the next generation or to have any influence in enfeebling the neural organism of descendants.

PHYSICIANS AND HEREDITY.

I frequently see it stated in serious literature that doctors do not believe in heredity, but in practice we find that the doctor who deals with nervous and mental diseases not only "believes" in heredity, but also believes that it is nearly the whole thing. There are abundant statistics tending to prove that epilepsy is hereditary in about 50 per cent. of the cases, and a similar percentage is true for the other diseases constituting the neuropathic family.

1. The only recent writer that I know who does not seem to share this view is Dr. Mercier, of London, who says: "For my part, I am constantly impressed with the number of insane persons—not including general paralytics—in whose family exhaustive search fails to discover any insane relative within a reasonable degree of consanguinity, and I am almost more impressed by the number of sane and normal persons who possess near relatives that are either insane or subject to allied nervous disorder." I cannot find that Dr. Mercier's opinion is shared by many of his colleagues.

Again, we often read in medical literature that hysteria, epilepsy, psychasthenia, tic, etc., are caused by this or that agency; or perhaps it would be more accurate to say that we read that these diseases have been relieved or cured by removal of this or that factor, attributed as a cause; but it is the consensus of opinion among neurologists that all attributed causes save heredity have practically no influence in the causation of these diseases.

Neurologists admit that there is such a condition as nervous exhaustion, and that it may be the result of manifold causes. Such nervous exhaustion following adequate attributable causation ends in recovery when the cause of it ceases to be operative and the forces of Nature have had opportunity to recuperate. The diseases that constitute the neuropathic family have no inclination to end in spontaneous recovery and their incidence stands in no relationship to the common causes of disease save as these causes act to deplete vitality and to allow the disease to become manifest. Nervous exhaustion, the result of de-vitalizing experience and illness, is one thing, and nervous exhaustion the expression of an inadequate endowment of neural energy is another. The former has nothing to do with heredity, the latter has all to do with it. Diseased conditions of the body caused by external agencies cannot be transmitted hereditarily. Predispositions to disease of any kind may be transmitted, and such transmission of predisposition encompasses the hereditability of infections and parasitic diseases.

As physicians dealing with disease, we early become aware that our important mission is the prevention of disease. With the exception of those instances in which the surgeon is able to remove the cause of disease or the disease itself and the physician is provided with an immunizing or antagonistic serum or drug, our capacity to cure disease is coequivalent with our capacity to aid the powers of Nature. The cure of disease and, to a very large extent its amelioration, stands in no relationship whatsoever to the administration of drugs, and there can be little doubt, I believe, that both human suffering and mortality would not be increased a whit if all the drugs of the Pharmacopeia—with the exception of half a score or so—were as lost as the art of the Etruscans.

The exalted position which our profession occupies to-day is the result of achievement and of promise. The achievement has been largely in the direction of the prevention of disease. Plagues, typhoid fever, tuberculosis, yellow, malarial and remittent fevers are no longer the

scourge of humanity. Discovery of their causes has been followed quickly by the discovery of means for their prevention, and in other directions the discovery of the cause of diseases, such as smallpox, diphtheria and myxedema, has been followed by the discovery of serums which robs them of terrors. Therefore, it is no source of wonder, then, that the keenest efforts of the members of our profession have been in the past and are at the present attracted toward the discovery of the cause of disease, but our attentions have been engrossed by the microbial cause of disease to such an extent that we have neglected the study of one of the most important factors in their occurrence, namely, heredity.

The leading characteristics of our civilization need not be enumerated to justify the assertion that the care of the sick, the poor, the incompetent and the criminal is one of its conspicuous characteristics. The hospitals, the colonies, the asylums, the houses of relief which dot this country from the Atlantic to the Pacific testify to the truth of this statement. Although I have no absolute knowledge in the matter, I fancy that 100 times as much money is given in charity in this country as was given a generation ago, and the tendency to give seems to be increasing. No one doubts that it is more blessed to give than to receive, and few who make giving a business doubt that it is among the most difficult tasks that a person can set himself. I am of the opinion that his task could be made easier if he would take the biologist and student of heredity more intimately into his counsel. The present-day trend of charitable bequests is in the direction of disseminating education and improving environment; in other words, exclusively for bettering the individual, or, to express it in still other words, to enable him to acquire desirable characteristics, such as health and good manners. But if the teachings of heredity, which are every day becoming more widely accepted, are eventually shown to be true, such giving is merely a makeshift. If the object is the improvement of the human race, we must aid evolutionary progress in other ways than by merely facilitating the development of acquired characteristics. We have studied the effect of environment, of occupation, of nourishment, upon the human species, and now we must study and observe the effects of breeding, just as the botanist or the cattle-fancier studies it. We may not be able to do anything save draw conclusions from such study, but we may hope that our successors may not be trammeled by our prejudices, our emotions, our passions; aye, even our humanitarianism, and that they may reap

sevenfold that which we have sown upon the furrows of righteousness, to paraphrase the saying of the Hebrew seer.

THE SCIENCE OF EUGENICS

The problem of practical eugenics is a real one, and it is one to which every physician should give sufficient attention to apprise himself of its tenets. Its most ardent advocate, Karl Pearson, has demonstrated that legislation devoted to the improvement of the race by change of environment may not only be ineffectual, but may be positively detrimental if its result be to modify selective action. He has shown that factory legislation in England stands in direct relationship to reduced birth-rate, and reduction of birth-rate controverts the two fundamental necessities of practical eugenics, which are (1) the production of a sufficient supply of leaders of ability and energy for the community, and (2) the provision of intelligent and healthy men and women for the great army of workers. When legislation lessens the economic value of a child, the birth-rate decreases. If, at the same time, the selective death-rate is decreased by measures taken to protect the enfeebled, the most serious obstacles are put in the way of evolutionary progress, and devolution only can be the result. Natural evidences of such retrogression would be very slow to show themselves; that is, it might and probably would require thousands of years, and it is a painful thought that possibly our obvious incapacity to measure up intelligently and emotionally with the leaders of thought in the days of Hellenic supremacy may be but a manifestation of this devolution incidental to civilization.

The individual who will stand up in any community to-day and advise and urge the charitably inclined not to provide institutions wherein the feeble-minded and incompetent can be brought to a state of development which will entitle them to the privileges of citizenship, to hesitate before he provides a sanatorium for the treatment of a disease which tends to lower the selective death-rate, to deliberate carefully before he contributes to the maintenance of an institution that fosters and protects those unable to control themselves against property or persons of others would be a marked figure, and I have no doubt the finger of scorn and contumely would be pointed at him by many righteous, God-fearing persons in that community. It is quite possible even to believe that he might be assailed from the pulpit and in the press, as a reproach to his neighbors, a scorn and a derision to them around him, but if he defined his position carefully might he not have the approbation of the thoughtful?

Let us take a few specific instances. There is at the present time in this country a widespread interest in the education of the mentally deficient. I doubt if there is a state in the Union without schools and institutions endowed and seeking endowment in which the attempt is seriously being made to educate this class; yet even the most sanguine, the most optimistic, hardly hope that more than one out of ten of the average idiotic child (I know the average idiotic child should be defined more closely, but I fancy my reader will understand what I mean) can be educated so that it can take care of itself. And what is the result of all this? They indulge ultimately their genetic inclinations, unfortunately nearly always paramount, assume the responsibility of parentage and bring into the world individuals likely to be mentally deficient and physically disordered.

I make the plea for an enlarged scope of activity for the physician's usefulness, and when I say physician I mean not only the consultant, not only the man with state or interstate reputation, not only the man who is president of a large medical body or a professor in a medical college, but the practitioner of medicine in the smallest community in the remotest parts of the country. His education, his opportunities for the study of the human body and the human soul at close range, his appreciation of the disaster that results from breaking the laws of Nature or outraging the principles of Hygeia, fit him for the position of guide unrivaled by any other profession or calling. The opportunity to instruct the community in which he lives and the state at large in regard to sanitation he has embraced, and the result is that typhoid fever is no longer the modern minotaur; that tuberculosis has been dethroned from its position as the most competent death-dealing agency known to the white race; that yellow fever is ceasing to be a menace to mankind. He has likewise given earnest of his duty in disseminating the truth concerning the perniciousness of overfeeding and habitual alcohol-taking, although, perhaps, this field is still inadequately tilled. But, so far as I am able to judge, we have done little toward acquiring a knowledge of the principles of heredity and nothing toward disseminating them for the benefit of the peoples to whom we owe protection and to the state to which we owe fealty. I believe that I shall find an echo of assent in the mind of every physician here when I say that the majority of our profession to-day believe but vaguely in the inheritance of acquired characteristics and strongly in the relative importance of Nurture over Nature.

What can we do toward attempting to solve the riddle of heredity? If every physician who comes

intimately in contact with forms of disease known to be hereditary, such as hemophilia, alkaptonuria, Friedreich's disease, Huntington's chorea, the dystrophies, etc., were to make it his duty to gather all the data, not only of the person afflicted, but of his family, and make the record complete and then insure that that record should be continued by those able to follow the record of the health and disease of his descendants through three generations, we would have material that would permit us to draw reliable conclusions. But when we contrast this ideal with what ordinarily occurs, we see that the average record merely states that a similar disease was known to have occurred in an aunt or in a sister, but no closer relationship can be traced. In reality, what is needed is a detailed specific account of each member of a family that shows evidences of hereditary disease; not the judgment of the observer, but an account of how the individual lived, what he accomplished and what hostages he gave to fortune or to fame.

Physicians have an almost unique and certainly enviable opportunity to contribute successfully to the study of agencies under social control, and which improve or impair the racial qualities of future generations either physically or mentally; that is, to the study of that which has been called eugenics.

Mr. Francis Galton, the originator of this science, has shown to the satisfaction of most men that mental and moral characters are inherited just as strongly as physical characters. We know that the welfare of the race can be enhanced by improvement in education and in social conditions and that the individual's health, character and efficiency stand in very definite relationship to his environment. This does not gainsay the fact that they stand also in relationship to his hereditary endowments. The hereditary nature of a man is more important than his training and circumstances in determining his adult mental and physical equipment. It is to the descendants of the men and women who are born great that we must look for the future greatness of mankind. Therefore it behooves us to give some of that enormous amount of absorbing attention that is now given to education, sanitation and preventive medicine generally to social science and to social legislation.

The relative birthright of good and bad stock is the fundamental factor, and what are we as physicians doing toward educating those who look to us for enlightenment, toward increasing the birthright of the good and diminishing that of the bad? Recently, we heard much in this country of race suicide. The discussion of it did not get beyond generalities, but I think you will

agree with me that the practices amounting in effect to what is called race suicide have never been very common among the criminal, the pauper, the defective, the uneducated. That there is a deliberate restraint on the part of the more prudent and intelligent wage-earners in respect to assuming the responsibility of paternity it would be useless to deny; statistics are at hand to prove it abundantly; that the educated and rich have smaller families at the present time than their likes of two generations ago everybody grants.

Galton tells us that "the first object of eugenics is to check the birth-rate of the unfit, instead of allowing to come into being individuals in large numbers to perish immaturely." The second object is the improving of the race by furthering the productivity of the fit, through early marriages and healthful rearing of children. Natural selection rests upon excessive production and wholesale destruction; eugenics upon bringing into the world no more individuals than can be properly cared for and only those of the best stock.

That those unfitted financially, morally and mentally to rear them have the largest families is notorious. What can be, what is the result? It is that the unfit are multiplied out of all proportion to the fit, that the laws of Nature are circumvented, that the selective death-rate is thwarted by social convention and modern humanitarianism. The spoke which we thus put in the wheel of evolution is bound to affect the due progress of its chariot. If the land shall not be desolate because of them that dwell therein for the fruit of their doing, we must increase the birth-rate of the fit. Believe me my ears are familiar to the contemptuous rejoinder, "You can preach all you please about science and heredity and breeding and eugenics, but human beings will go on marrying for love or for money, and the mating of the training stable and the fertilization of the garden can never be applied either in palace or hovel." No one believes that it can be. That does not concern us as physicians, though it may as citizens and elements of the social fabric. It concerns us to diminish disease and its potencies, and one of the surest ways of doing it is by combating the forces of pathologic heredity. Human beings are amenable to reason, many of them even when in the throes of the divine frenzy. The object and aim of life of those whom we would resemble is to add to the sum total of happiness and efficiency in the world, while participating in it themselves. When such persons are likely to propagate hereditary disease of the brain or spinal cord or muscles or blood, many of

them are likely to refrain from marriage and propagation when they have been properly informed of the possibilities. What, you say, "Are we justified in denying to the children of parents who display hereditary disease the pleasure-pain of matrimony and parentage? Do not many of the children of such parents go through life without indication of such disease?" We cannot legitimately request them to refrain at the present time because our knowledge of the laws of heredity in man is so deficient. But if the laws of Mendelian descent are eventually found to be applied to man, we shall be able to give the dominants and the recessives appropriate advice and so enhance the one and squash the other. But earnestly and soberly, fellow-practitioners, what is the advice that members of the neuropathic family get to-day from us concerning matrimony and the fulfillment of its purpose? I regret to have to admit that my case books tell me that marriage is advised or consented to by the physician in the vast majority of instances in which his counsel has been sought. Just how the belief arose that marriage was adequate to cure fits, headache, obsessions, and phobias would be interesting to learn. It would be easier to find out how the medical profession imbibed the idea. If time permitted, I could cite instance after instance from my personal experience in which profound unhappiness and misery have come to whole families from improper advice concerning matrimony to an individual who had indications of epilepsy, manic-depressive insanity, dementia praecox, psychasthenia, and other similarly heritable diseases.

We owe it to ourselves and to those whose health we safeguard to counsel those who are afflicted with hereditary disease not to propagate, to advise against the marriage of the unfit and to encourage the fit to fulfill their destiny that their descendants may say, like the psalmist, "The lines are fallen unto me in pleasant places; yea, I have a goodly heritage."

My plea is that the physician enlarge his sphere of usefulness; that he embrace his unparalleled opportunities to enhance the estate to which he is born; that he make himself felt in the community and nation as a force more powerful than mammon, and so give earnest of his own inheritance until the redemption of the possession. To prepare himself for this task he must become a student of biology, or at least an intelligent reader of its literature. If he accepts a hint from me he will get occasional respite from his labors in this and other directions by perusing the writings of a man who is at the same time very wise and very foolish—George Bernard Shaw.

Descartes, to whom medicine as a science, in other words, normal and pathological physiology, owes most, said if man is to be perfected the means of perfecting him must be sought in the medical sciences. Let us to our task!

37 West Fifty-fourth Street.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from page 372, Vol. II.)

WAR HISTORY.

INDIANA PHYSICIANS IN THE MEXICAN WAR.

There were five Indiana regiments in the Mexican War, numbered from One to Five. Sixty years have elapsed since the close of that war and the surgeons have all passed away.

Strange to say, the Mexican War left no valuable medical history or records. I find in the *Indiana Journal of Medicine*, volume 5, page 145 (August, 1874), a contribution from Dr. Alfred Patton, late of Vincennes, Ind., entitled "Recollections of Medical Service During the War with Mexico." In this paper Dr. Patton narrates some interesting observations during his service in that country. The doctor went out as a private soldier in the First Mississippi Rifles (Jeff Davis' Regiment), but soon after arriving there was detailed in the medical department, where he rendered service during the continuance of the war. I may also state that Dr. Patton during the late Civil War served as brigade surgeon of Maxey's Brigade (Confederate).

It is possible that some other Indiana physicians may have served in the ranks or as officers during the war, but I have no means at hand for ascertaining their names.

FIRST INDIANA VOLUNTEER REGIMENT.

Surgeon, Dr. C. V. Jones* (promoted from private); assistant surgeon, Dr. William Fosdick.

SECOND INDIANA VOLUNTEER REGIMENT.

Surgeon, Dr. Daniel S. Lane; assistant surgeon, Dr. John T. Walker.

THIRD INDIANA VOLUNTEER REGIMENT.

Surgeon, Dr. James S. Athon; assistant surgeon, Dr. John G. Dunn.

* See Transactions 1884, p. 213. Was surgeon of the 63d Ind. Vols. in Civil War.

FOURTH INDIANA VOLUNTEER REGIMENT.

A note from the Adjutant General's office at Washington, D. C., says: "Isaac Fenley, contract surgeon, United States Army, is shown to have been on duty with the Fourth Indiana Infantry Volunteers in the years 1847 and 1848. Nothing has been found of record to show that any other person was on duty with that organization in a medical capacity." (Letter Dec. 14, 1908).* See this JOURNAL, p. 244.

FIFTH INDIANA VOLUNTEER REGIMENT.

Surgeon, Dr. James S. Athon; assistant surgeon, Dr. P. G. Jones.†

ALPHABETICAL LIST OF SURGEONS AND ASSISTANT SURGEONS WHO SERVED IN INDIANA REGIMENTS DURING THE CIVIL WAR.‡

Forty-four years have elapsed since Lee's surrender at Appotomax.

Indiana sent out into the Civil War 136 regiments of infantry, 13 regiments of cavalry, 1 regiment of artillery, 25 companies of artillery. Including 2,130 naval volunteers, Indiana sent 210,497 men to that war, and to care for these she supplied about 500 surgeons. There were 24,416 of the sons of Indiana who laid down their lives for their country in that war.

The regiments in the Mexican War had one surgeon and one assistant surgeon, while those in the Civil War had one surgeon and two assistant surgeons.

In many instances Governor Morton sent civil surgeons to help care for the wounded after great engagements. A large majority of these surgeons have passed away and the minority is rapidly decreasing.

* While at Matamoras an amusing incident occurred. Charges were preferred against one of the medical officers of Col. Willis A. Gorman's [Fourth] Indiana regiment, and I was ordered by the medical director to investigate the charges. I found Colonel Gorman and one of his captains in waiting for me at the colonel's headquarters. In a few words the captain explained the nature of the charge, when he asked, 'What would you think of the skill of a physician who prescribed gunpowder, tar and beefsteak, as a diet for a patient very low with typhoid fever?' This was more serious than I expected, and I demanded to see the prescription, which I found was written in the doctor's best style, and which I readily deciphered to mean, 'Diet—Gunpowder tea, and beef tea, every four hours alternately.' I explained the prescription to the colonel and the officers making the charge, and left them better satisfied with their medical officer. The moral of this is that doctors should learn to write a legible hand, as from the neglect to do so they often suffer in reputation, and that which is far worse, it sometimes leads to serious mistakes by druggists and nurses."—DR. ALFRED PATTON.

† For short sketch of Dr. Jones see March number of this journal, p. 100.

‡ In the preparation of this list I have expended both time and care, having diligently compared those of "Adjutant General's Report of Indiana," "Roster of Regimental Surgeons and Assistant Surgeons During the War of the Rebellion," and the "Official Army Register of the Volunteer Force of the United States Army." I wish also to acknowledge valuable assistance from Maj. W. W. Daugherty, Recorder Military Order of the Loyal Legion of the United States, Indianapolis.—G. W. H. K.

Several surgeons saw service in two, and a fewer number in three regiments, and some physicians served as hospital stewards.

It must be borne in mind that a number of Indiana physicians also served as combatants during the Civil War. Many were enlisted as privates and also line officers of regiments. Quite a number of men who served in the Civil War, and possibly also in the Mexican War, took up the study of medicine after their return home and became valuable members of the medical profession.

Abbott, Charles H.	Bray, Madison J.	Crosby, Thomas H.	Gillen, H. H.
Aborn, Orin	Brazelton, John B.	Crouse, Henry M.	Gillespie, William
Adams, David	Brenton, William H.	Crowder, Robert H.	Gillum, James
Adams, James R.	Brooks, Mordecai	Culbertson, David P.	Gilmore, Alexander W.
Adams, Marcellus M.	Brown, Jesse R.	Culbertson, Joseph R.	Glick, Elias B.
Aichele, Emil	Brown, Jacob R.	Culbertson, Robert H.	Goldsberry, John A.
Allen, Joseph S.	Browne, John T.	Cullen, John C.	Goodwin, John R.
Allen, William S.	Brown, S. Clay	Curry, John	Gordon, George W.
Alexander, John H.	Brown, Wilkins B.	Cyrus, William H.	Gorrell, Joseph R.
Anderson, Joseph V.	Bruce, George W.	Daly, George P.	Gould, Vernon
Anderson, William	Brucker, Magnus	Darnell, Milton B.	Graham, William B.
Applegate, Charles H.	Brusie, Luther	Daughters, Andrew P.	Gray, Arthur W.
Archer, Samuel M.	Bryan, George W.	Davis, John B.	Gray, John M.
Armstrong, James B.	Byers, Alexander R.	Davis, John W.	Gregg, James S.
Arnold, Martin B.	Bryson, Frank T.	Davis, Joseph H.	Gregg, Vincent H.
Arthur Christopher S.	Buck, Robert II.	Davis, Robert P.	Green, Hiram S.
Averdiek, Henry G.	Burton, William A.	Davis, Samuel	Green, John N.
Avery, Increase J.	Bushnell, Samuel B.	Davis, Solomon	Griffith, John C.
Avery, John P.	Butterworth, Wm. W.	Davidson, Benjamin F.	Grinwell, John L.
Austin, Thomas D.	Buzett, Edward F.	Davidson, William	Goss, James M.
Babbitt, Edward D.	Byrn, Spencer	Davison, Henry C.	Grove, Jasper M.
Baker, Braxton	Calderwood, James C.	Deweys, Annin W.	Grover, Henry C.
Ballard, Micajah	Campbell, John C. L.	Dicken, James L.	Guffin, John
Banks, Ephraim N.	Campfield, John A.	Dixon, William H.	Griffin, John
Bare, Addison W.	Carley, Rush	Doane, George M.	Haines, Abraham B.
Bare, John R.	Carr, George W.	Dodd, James	Hall, Daniel D.
Barker, William L.	Casterline, Amos B.	Dodge, Henry C.	Ham, L. J.
Bassett, John Q. A.	Casterline, Ziba	Dodson, Jonas H.	Harriman, S. B.
Bayse, Thomas S.	Casselberry, Isaac	Dome, David C.	Harris, William B.
Beachley, Nathaniel J.	Chamberlain, Jas. M.	Downey, William A.	Harrison, Robert G.
Beard, Ferdinand W.	Chamberlain, N. A.	Duffield, James T.	Harrison, Thomas H.
Beck, Elias W. H.	Champ, George W.	Duffy, John S.	Hawn, Emanuel R.
Beck, William H.	Chandler, Joseph A.	Duckate, John S.	Haymond, William S.
Beckwith, Lod W.	Charlton, Robert	Dunn, Williamson D.	Hayes, Samuel M.
Beebe, James	Charlton, Samuel H.	Dunn, Williamson D.	Heaton, Johnson F.
Beeks, Green C.	Chittenden, George F.	Durand, Amos M.	Helmer, Orlando H.
Bell, Nathaniel G.	Chitwood, Joshua	Dutton, Daniel B.	Henderson, John F.
Bence, Robert F.	Clapp, William A.	Easterling, Amos	Hendricks, William C.
Bennett, Basil B.	Clippinger, George W.	Ebersole, Jacob	Henry, Robert
Benson, Julius L.	Clowes, D. A.	Edgerle, George W.	Henry, David H.
Berryman, James A.	Cole, William C.	Edwins, Stanley W.	Hervey, James W.
Bigelow, James K.	Coleman, Asa	Elliott, James S.	Hervey, Thomas P.
Bigney, Peter M.	Coleman, Horace	Ellis, Hamilton E.	Hiatt, Christopher C.
Blackwell, John A.	Collett, Edward T.	Elston, William T.	Higbee, Edward S.
Blackstone, John K.	Collings, Isaac S.	Eno, Newton G.	Higinbotham, Samuel
Blount, Rufus F.	Collins, Erasmus B.	Evans, David S.	Hilburn, Jabez C.
Blaser, Felix F.	Collins, George M.	Everts, Orpheus	Hitchcock, John W.
Blair, William W.	Collins, William A.	Ferguson, William T.	Hitt, John Y.
Bodman, Elam	Comingor, John A.	Field, Nathaniel	Hoagland, John S.
Bogart, Henry J.	Confer, James M.	Fisher, Elias	Houghland, William T.
Bogle, Christopher F.	Conn, Isaac T.	Fitzgerald, David A.	Hobbs, William P.
Bohrer, G.	Connnett, Mahlon C.	Fitzgerald, Jenkins A.	Hobbs, Wilson
Boor, William F.	Constant, John H.	Flack, William C.	Hochstetter, Jacob P.
Bond, Richard C.	Cook, Robert H.	Florer, Thomas W.	Hodgkins, Lewis W.
Bounell, Matthew H.	Cooper, Joel S.	Ford, James	Hoffman, Max F. A.
Bosworth, Richard	Cox, Jesse T.	Ford, John H.	Holzman, Samuel E.
Boynton, Charles S.	Craig, Isaac N.	Forstmeyer, Emil	Holton, W. M.
Boyd, Samuel S.	Craig, John M.	Fosdick, Albert C.	Hornbrook, William P.
Boyse, Thomas F.	Cravens, James W.	Foster, William C.	Horner, Jacob S.
Brackett, Charles	Cresap, William S.	Fouts, William D.	Houser Jacob H.
		France, Samuel	Howard, Noble P.
		Freeman, Samuel A.	Humphreys, Lewis
		Freeman, William	Hunt, Andrew M.
		French, John S.	Hunter, James B.
		Fritts, Thomas J.	Hurd, Anson
		Fry, Thomas W., Sr.	Hutchinson, David
		Fullerton, George W.	Hutchison, Francis A.
		Gall, Alois D.	Ireland, William H.
		Garrett, Anthony	Irwin, George E.
		Garrison, Herod D.	Jaquess, George D.
		Garrison, James L. F.	Jay, James C.
		Garver, Henry F.	Jeancon, John Allard
		Garver, James A.	Jessup, Robert B.
		Gatch, James D.	Johnson, D. R.
		Gentry, Zachariah B.	Johnson, Isaac C.
		Gerrard, Jerome B.	Johnson, Jarvis J.
		Gerrish, James W. F.	Johnson, John B.

- Johnson, Samuel F.
 Johnson, Thomas J.
 Johnson, William W.
 Jones, Caleb V.
 Jones, George W.
 Jones, Harry
 Jones, James T.
 Jones, John H.
 Jones, Joseph
 Jones, Thomas N.
 Jones, William B.
 Josse, John M.
 Kay, Robert
 Kay, David G.
 Keen, Lorenzo S.
 Kellogg, Norman P.
 Keiser, Alfred
 Kelly, Mathew
 Kelso, William H.
 Kemper, G. W. H.
 Kendrieck, William H.
 Kennedy, Hamlet K.
 Kennedy, Leroy II.
 Kersey, Silas H.
 Kilgore, Tecumseh
 Killen, James
 Kimball, Abner D.
 King, Henry R.
 King, William F.
 Kirby, Henry
 Kirkpatrick, Geo. W.
 Knight, James H.
 Krauth, Ferdinand
 Kuester, Charles E.
 Kunkler, Gustave A.
 Lambey, Louis
 Lansing, Sylvester
 Larkin, John B.
 Lattimore, Finley C.
 Leavitt, Philander C.
 Leech, Elliott W.
 Leedy, John K.
 Lemon, William H.
 Lent, Cyrus V. N.
 Lewis, Eli
 Lewis, Samuel B.
 Liddall, James P.
 Lininger, Daniel P.
 Lomax, William
 McCarthy, John F.
 McChristie, John
 McClain, James
 McClelland, James S.
 McClure, Samuel M.
 McCoy, George K.
 McCoy, James A. C.
 McCoy, John
 McCrea, Thomas P.
 McCune, George W.
 McFadden, William G.
 McGee, Richard
 McKinney, Asa W.
 McNutt, James H.
 McPheeters, John S.
 McPheeters, Joseph G.
 Magann, Edwin W.
 Mageniss, John
 Manker, Lewis
 Martin, James W.
 Martin, Samuel F.
 Martin, William H.
 Martin, W. W.
 Mason, Ferdinand
 May, Willis L.
 Meeker, Lysander
 Meek, John A.
 Meeker, Daniel
 Melsheimer, Chas. T.
 Mendenhall, Wm. T.
 Mereer, William M.
 Meredith, Marion
 Meredith, Wood
 Merit, Nathaniel P.
 Messner, Samuel F.
 Milner, Isaac N.
 Miller, James
 Mills, James R.
 Mitchell, Robert
 Mitchell, Elisha V.
 Mitehell, Robert S.
 Moffitt, John
 Monroe, Jasper R.
 Monteith, Jacob S.
 Montgomery, Geo. B.
 Moore, Anderson M.
 Morgan, James W.
 Morrow, Doctor F.
 Morrow, James L.
 Moss, Gordon A.
 Moss, Gordon D.
 Mullen, Alexander J.
 Mullinix, Maston G.
 Munford, Samuel E.
 Murphy, Alexander D.
 Murphy, Alexander M.
 Murray, Ralph V.
 Myers, Seth F.
 Myers, William D.
 Myers, William H.
 Neat, Thomas C.
 Neely, John M.
 Nelson, William Y.
 New, George W.
 Newland, Benjamin J.
 Nichols, John D.
 O'Farrell, Robert M.
 Olds, Joseph H.
 O'Neal, Laughlin
 Orr, James P.
 Osgood, Howard G.
 Paterson, John J.
 Patten, James C.
 Pattison, George W.
 Pardee, Charles A.
 Parks, Edward R.
 Parsons, George W.
 Parmerlee, H. M.
 Pearman, Francis M.
 Pearce, John W.
 Pearson, Charles D.
 Peck, Samuel W.
 Perkins, Conrad S.
 Phipps, John M.
 Piatt, William C.
 Pickthall, Arthur
 Pitcher, Stewart C.
 Plummer, Isaac N.
 Poffenberger, Isaiah
 Pope, Henry E.
 Porter, John P.
 Pottenger, Wilson
 Potts, John
 Pratt, Samuel R.
 Preston, Albert G.
 Priehet, John
 Prunk, Daniel H.
 Ralston, William G.
 Read, Ezra
 Reed, Albert S.
 Reagan, Amos W.
 Reagan, Jesse
 Rerick, John H.
 Richards, Samuel D.
 Richardson, A. G.
 Riffle, John S.
 Riter, John A.
 Robinson, John A.
 Robinson, Lawson D.
 Robson, John R.
 Robson, Robert
 Rockwell, William
 Roe, John L.
 Roether, Daniel B.
 Rogers, Dudley
 Rooker, James I.
 Rose, Madison H.
 Russell, George H.
 Ruter, Rinaldo R.
 Rutledge, William
 Ryan, Townsend
 Sabin, Elias H.
 Sadler, Joseph J.
 Salisbury, David
 Seearce, John C.
 Schell, Frederick A.
 Schmidt, Gustavus
 Schussler, Charles
 Scott, William
 Scott, William G.
 Seudder, John A.
 Sexton, Marshall
 Shaffer, Abner H.
 Shapley, William W.
 Sheldon, George W.
 Sherman, Mason G.
 Sherrod, William F.
 Sherwin, Herman H.
 Short, Wesley
 Simms, John M.
 Simonson, James C.
 Slaughter, Robert C.
 Slaughter, William W.
 Slavens, Zenas L.
 Smith, Andrew J.
 Smith, John W.
 Smith, William R.
 Smith, William Z.
 Smyth, William C.
 Smythe, Gonsolvo C.
 Spain, Archibald W.
 Sparks, Nathan B.
 Spencer, Robert
 Spencer, William
 Spottswood, E. T.
 Spurrier, John H.
 Squire, William B.
 St. Clair, Owen
 Stearns, Elias P.
 Stewart, John L.
 Stewart, William J.
 Stillwell, Joseph A.
 Stukey, John M.
 Swaford, B. B. F.
 Swartz, David J.
 Sweeney, Thomas J.
 Sweezey, William C.
 Taggart, John F.
 Taylor, A. B.
 Taylor, Daniel W.
 Taylor, William D.
 Teal, Norman
 Tilford, John H.
 Tilman, Jonathan R.
 Tillson, Hosea
 Thomas, Charles L.
 Thomas, Elias B.
 Thomas, James H.
 Thomas, John H.
 Thompson, John C.
 Todd, Robert N.
 Todd, William A.
 Tolerton, James
 Torbet, George A.
 Triplett, Charles E.
 Twiford, Willis H.
 Tyner, Samuel L.
 Underhill, Joshua W.
 Vaile, Joel
 Van Vorhis, F. J.
 Vincent, Henry C.
 Vincent, Jeremiah K.
 Voyles, David W.
 Walker, Augustus C.
 Walker, John T.
 Wallace, James P.
 Walton, Allen M.
 Washburn, Israel B.
 Waterman, Luther D.
 Weaver, Samuel M.
 Webb, William A.
 Weddington, Saml. C.
 Weir, Andrew N.
 Welborn, William P.
 Welman, Richmond M.
 Wells, James C.
 Whitesell, Joseph M.
 Whitaker, Eli D.
 White, Arthur
 White, Jacob S.
 White, James B.
 White, John M.
 Whitehall, Alex. L.
 Whitesell, Philip P.
 Widmer, John F. B.
 Wiles, William V.
 Willard, Henry W.
 Williamson, Eleazer
 Williamson, Robert A.
 Williamson, T. W. C.
 Wilson, Isaac
 Wilson, Jacob B.
 Wilson, James
 Winans, Richard
 Wishard, Joseph M.
 Witt, William B.
 Wolf, Harvey S.
 Wonsetler, Gideon
 Wood, James A.
 Wooden, John L.
 Woods, Calvin J.
 Woods, Daniel L.
 Woolen, Green V.
 Wright, Ivy E.
 Youart, John M.

The following named physicians were surgeons or assistant surgeons in U. S. colored regiments:

Eastman, Joseph,
 Strong, John T.

Weist, Jacob R.

Thompson, James L., Surg. 2d Tenn. H. A.

MEDICAL OFFICERS FROM INDIANA COMMISSIONED BY THE PRESIDENT, VOLUNTEERS,
1861-65.

John S. Bobbs, surgeon.
William D. Stewart, surgeon.
William C. Thompson, surgeon.
Charles S. Frink, surgeon.
James M. Study, assistant surgeon.

REGULAR ARMY.

Charles McDougall, born in Ohio, entered service from Indiana as assistant surgeon, July 13, 1832; major surgeon, July 1, 1838; lieutenant colonel and assistant medical purveyor, July 28, 1866; retired Feb. 22, 1869; brevet colonel, Nov. 24, 1864, and brigadier general, March 13, 1865, for faithful and meritorious service during the civil war. Died July 25, 1885.—Historical Register and Dictionary of the U. S. Army, Heitman, vol. i, p. 663.

John Moore, born in Indiana, entered service as assistant surgeon, June 29, 1853; major surgeon, June 11, 1862; lieutenant colonel, assistant medical purveyor, Oct. 8, 1883; brigadier general, surgeon general, Nov. 18, 1886; retired Aug. 16, 1890. Brevet lieutenant colonel, Sept. 1, 1864, for gallant and meritorious service during the Atlanta campaign, and colonel, March 13, 1865, for faithful and meritorious services during the war.—Ib., p. 723.

VOLUNTEER NAVY*—ACTING ASSISTANT SURGEONS
(CIVIL WAR).

Philip H. Barton.
George F. Beasley.
William Commons.
David G. Curtis.
William C. Foster.
Thomas F. Leech.
Jacob J. Smith.

SPANISH-AMERICAN WAR.

Indiana equipped and sent out five regiments for this war, and furnished them with twenty-seven physicians, who served as surgeons and hospital stewards. An alphabetical list of their names is given:*

SURGEONS.

Barcus, Paul J.
Barnett, Charles E.
Barnett, Walter W.
Buchler, Eugene.

* William Maxwell Wood, rank captain, entered the Navy, May 16, 1829. He was a native of Maryland, from which state he was appointed, but claimed his residence in Indiana.

* List of names furnished by Dr. Frank W. Foxworthy.

Charlton, Fred R.
Davis, William S.
Foxworthy, Frank W.
Gerrish, Millard F.
Garstang, Reginald W.
Hawkins, Eugene.
Jones, Homer I.
Kyle, John J.
Kimball, Thomas.
Smith, Wickliffe.
Stunkard, Thomas C.
Wilson, James.

HOSPITAL STEWARDS.

Hawkins, Robert W.
Langdon, Harry J.
Linville, Davis S.
Moore, Harry S.
Moore, Harvey A.
Pfaff, John A.
Schultz, Guy A.
Shell, Ogden G.
Sommer, Edgar L.
Townsend, Terry M.
Wright, Charles E.

“RACE SUICIDE.”

“QUANTITY OR QUALITY: SOME ECONOMIC
SUGGESTIONS.”*

EMERSON E. McGRIFF, M.D.
PORTLAND, IND.

The decline in American birth rate has, for several years, been of considerable interest to those who observe national tendencies. Medical and ministerial associations have called the public attention to it, but it has received more careful and serious consideration since President Roosevelt sounded the alarm of danger from the White House in what he termed “race suicide.”

There is not much sentiment in favor of large families, and, while the President’s advice was timely, he is, in my opinion, in the minority. The term “race suicide” is usually considered in a broader term than should be given it. The strict meaning of the term is “voluntary ceasing to propagate.” I shall, however, discuss it in its broader meaning, in the meaning generally given it, which is “extermination through such agencies as war, disease and vice, by loss of fertility and by voluntarily ceasing to propagate.” That the large families of early days of our country

* Read before the Eighth District Medical Society at Portland, Ind., April 16, 1908.

have disappeared all are aware. At first it only applied to the well-to-do in the cities, later it reached the towns, and now it has extended to the rural districts. Statistics inform us that eight was the average family two centuries ago, while two is the average family to-day.

The subject, then, is one of public interest. It affects us as a nation, and the President so considered it when he called the public's attention to it in such strong language as the President alone can use. The future welfare of our country is vitally interested in the subject. The Republic will endure as long as the ideas of its founders remain dominant, and such ideas will remain dominant as long as the blood of the founders remains dominant in the blood of its people. It is a free stock that creates a free nation. So long as the human harvest is good our country and its institutions will survive. The human harvest can only remain good while we leave for future generations the best and not the worst.

The Republic of Rome lasted as long as there were Romans. The American Republic will last so long as its people, in blood and in spirit, remain what we have learned to call Americans. By the law of probability it is estimated that there will appear in each succeeding generation the same number of poets, artists, scientists, patriots, athletes and superior men of each degree. But this can only continue while the percentage of each generation is practically equal in men of superior force or superior mentality. It is, therefore, necessary that such should survive to assume the responsibilities of the generation before. In other words, breeding from an inferior stock is the sole agency of race degeneration, the same as breeding from the superior stock is the sole agency of race progress. "Like the seed is the harvest." It is quality and not quantity that we want. Quantity of the proper quality. If it is only quantity, then we can open the gates of Castle Garden and let them roll in like an overflowing marsh. It is, therefore, important that immigration should be very carefully restricted and sifted, and the most rigid standards maintained, so as to exclude from our shores those who are unfit for citizenship by reason of alien prepossessions which they can not lose or forget and which are inherited by their children. If we continue to stand at the front in intelligence, in splendid physical development, we must not only exercise the most assiduous vigilance to avoid receiving the pauper, the criminal, the insane, the diseased persons who have left their own

country, for its good, but we must discourage and prohibit the diseased, the insane, the imbecile and those afflicted with hereditary disease from uniting in marriage and bringing into the world their kind. More stringent laws along that line should be enacted and enforced.

We have in the wars in which we have been engaged sent forth the best of our young men. Whether it has been war for gain or war for freedom, its effects have been the same. The young men who met the requirements of physical development were accepted as soldiers. They were the youths without blemish, the best the nation had were chosen to stop bullets. They came from the plow, from the workshop, and from the school, those from 18 to 45 years of age. The warlike nation of to-day is the decadent nation of to-morrow. It is important, then, that such young men's lives be spent in the improvement of the race rather than sacrificed in war. Let us have a board of arbitration representative of the great powers of the world to settle international disputes, and we can then "beat our swords into plowshares and our spears into pruning hooks, and war will be no more."

The decline of a people can have but one cause, and that cause is the decline in the type from which it draws its sires. A herd of cattle can degenerate in no other way than this, and a race of men is under the same laws. If any class of men be destroyed, whether it be in war or from any other cause, they leave no offspring and their like will cease to appear. By the sacrifice of their best, or the emigration of the best, and by such influences alone, have races and nations fallen from first rate to third rate in the movement of history. It is not what parents actually are, but what they might have been with their opportunities improved and their faculties developed which determines the course of inheritance, for the parents' actual qualities are inherited, the traits of the man or woman as he or she might have been, without the way in which these qualities have been actually developed.

So far as science knows, education and training play no part in heredity. The change in the blood, which is the essence of race progress, as distinguished from progress in civilization, finds its cause in selection only. The manner of living in the strenuous life is having its effect upon our people. Any man of any race withers in an atmosphere of vice. If vice strikes deep enough to wreck the man, it is likely to wreck or kill the child as well. The child depends on its parents for its early vitality. It is, therefore, important

that persons with hereditary disease or with disease contracted by vicious habits that will affect the offspring should be prohibited from marrying. Your experiences have been such, I know, that many cases have come under your observation in which marriage should be prohibited.

But, again, why is it that the large families of early days have disappeared? Is the decline of the birth rate founded on an economic motive? Have our social conditions so changed and our manners of living so changed that there is really a cause for it? It was reported that but five children were born on Fifth Avenue, New York, in the year 1906, while in like territory in the city where the poor reside there were several thousand. It certainly is not from an economic motive that so few were born on Fifth Avenue. The society woman, and it should not be confined to her alone, but women generally, object to bearing children because they do not like to make the sacrifices which are necessary to have a large family. The woman must be deprived of the theater, of society, of travel, of music and art, to say nothing of the pain and the suffering, of the danger of losing her life in childbirth and the inconveniences, burdens and anxieties attendant upon motherhood. But, on the other hand, she was created for a purpose, and to bear children is one of the duties she owes, the same as the soldier owes a duty on the field of battle.

We applaud the soldier, but we do not give to the mother the honor and respect that she is entitled to. "Unless the strong, intelligent woman bears a sufficient number of children, so that the race may increase, and not decrease, unless she brings up these children sound in body, soul and mind, unless this is true no brilliancy of genius, no material prosperity, no triumphs of science and industry will avail to save the race from ruin and death." So that society should look upon the woman about to become a mother with admiration and envy rather than with scorn and pity. The woman who deserts her home and neglects her children for the hollow pleasures of the social world is unworthy the name of mother. I like the diagnosis the old family doctor made of a society woman's sick baby. She had been away from home all day, neglecting her baby, and she sent for the old doctor to come and see what was the matter with it. It was crying feebly and looked pale and sick. The old doctor took it up in his arms. It immediately began to root around in his bosom with open mouth, and the old doctor solemnly handed it back to its mother and said, "I am sorry to tell you,

madame, I can do nothing for the child; it is hungry."

Blessed is the home where the good mother and wife is found. She is the richest jewel ever won by man. Without her nations would fall and civilizations crumble, without her charity would lose its sweetness, mercy its tenderness, and the Christian religion itself would perish. With duty well performed, she reflects the wealth, the power and the glory of the state and nation. She with her little ones prattling at her knee is the culmination of man's highest ideals of peace, love and perfect happiness.

But why are the large families of early days disappearing, and, more important, what is the remedy? There are many causes for it, but few can be considered here. Our social conditions and our manner of living are largely responsible. A respectable dwelling in a respectable neighborhood in the large towns or cities can not be rented for a family of eight children. The first question asked is, "Have you any children or dogs?" Married couples without children and preferably without dogs are the only acceptable tenants, so that the majority of young married people to-day do not want any children, certainly not more than one, the second is an accident, the third a misfortune, and the fourth a tragedy. But few women are willing to have all the children Nature would send. Sometimes the men object, for economic reasons, but usually they desire more children than do women; perhaps it is because they get all the pride and miss the pain. Many women who are best fitted to become wives and mothers are entering the professions, the stores and offices and other places heretofore filled by men only. Their desire to improve their condition leads to delay or lack of marriage, and consequently the prevention of birth. The satisfaction of being self-supporting, the pleasure of earning and spending her own money, the independence of accumulating for further needs, are inducements to her to remain single. In books, art, music, travel and cultured friends she finds a very acceptable substitute for marriage.

Marriage nowadays is by no means so necessary to women as men are apt to think, and while, if all conditions are favorable, the average woman might and perhaps would prefer to be married, she often considers it not worth the sacrifices which are often required.

Before we criticize women so severely for avoiding matrimony and becoming mothers of

half a dozen children, we must consider what we would do if in her place. We must consider the fact that she must face death, deliberately, every few years, from youth to middle age, suffering all the inconveniences and anxieties, what it means for a woman to give the best part of her life, the years between 20 and 45, when her mental powers are at their best, when enjoyment in the pleasant things of the world is keenest, to the exacting demands of the mother and wife. The constant care of children would drive a man insane. He would welcome a job in the ditch or the mines. He wonders how his wife can stand it and retain her patience and affections.

You of the medical profession can do more to better the conditions of which I have spoken than any other class of citizens. The physician's duties are greater to-day than ever before. Opportunities present themselves to you that are not presented to any other profession. Your advice would be followed when no or little attention would be paid to the advice of others. Our social conditions are such that, unless a change for the better is devised, we will degenerate as a nation and the undesirable foreigner will take the place of the American-born citizen. We should afford better protection for the children and for the preservation of their health than we have. They must have better opportunities for physical development. They should not be huddled in smoke and filth of the crowded cities, when the hills and valleys of the country smile and beckon them to her landscapes of beauty, where the wild flowers bloom and the sunshine plays with the zephyrs.

Toiling millions should not dwell amid blackened walls, only to be slaves to heartless masters, when untouched fields invite them to a happy home in the country. Helpless children should not be doomed to die by thousands in polluted hovels and crowded alleys, when the green meadows invite them to come and chase the butterflies, and the blossoming hills call them to romp and play, and return to their homes with renewed health and vigor. The grand mansions and the palaces of the rich do not hold all the happiness and nobility of the world. But there are millions of humble cottages in the towns and country filled with happy children, where virtue resides in the warmth and purity of the fireside, and where contentment dwells like continuous summer.

SPECIAL ARTICLE

THE SALTS AND PREPARATIONS OF IRON.

W. H. FOREMAN, A.B., M.D.
INDIANAPOLIS

AND
J. H. GERTLER, PH.G., PH.C.
INDIANAPOLIS.

The difficulties in the use of the various salts and preparations of iron do not come from a lack of knowledge of the indications for the use of iron, but rather from a lack of knowledge of the composition, properties and administration of the same. Most physicians are sufficiently familiar with the pathologic conditions in which iron in some form is indicated, and likewise they are fairly well informed as to how iron supposedly acts in the organism, but few have ever studied carefully the iron salts and preparations.

It is the purpose of this paper and the one which follows, not to consider so much the therapeutics of iron as to consider how iron may be therapeutically used.

The salts of iron may be broadly classified as organic and inorganic. Inorganic iron salts are those in which the iron may be separated out of the molecule, by electrolysis, or are acted upon by the general iron precipitants, such as ferrous sulphate and ferrie chlorid. The iron in these preparations form the base of a molecule which is composed of two parts, a negative and a positive element or radicle, of which the iron is generally found as the base or positive element.

Inorganic iron as such cannot be assimilated, but is converted in the process of assimilation into *ferratin*, an organic compound, in which form it may be utilized by the system. Inorganic iron has, however, by reason of its acid radicle, a special irritating effect on mucous membrane by means of which it stimulates the absorption of the alkaline iron albuminates, into which forms the inorganic iron salts are changed in the intestinal tract, for which reason it may be preferred to organic iron. On the other hand, the irritating effect of the inorganic iron is injurious to some persons, and in such cases the organic iron is to be preferred.

Again, the hydrogen sulphid and other sulphur compounds formed by the decomposition of foods in the intestinal tract are taken up by the inorganic iron radicle, forming insoluble iron sulphides, and thereby protecting the ingested food-iron from attack by these sulphur com-

pounds, thus permitting its absorption and utilization. By the same process deleterious decomposition products are removed from the bowel, for which reason the inorganic iron is to be preferred to the organic iron.

The organic iron molecule consists of two or more atoms centering around the atom carbon. It cannot be separated by electrolysis, neither does it possess negative or positive elements. Organic iron therefore is non-irritant, does not coagulate albuminous substances, and is not affected by tannin and the other precipitants of inorganic iron.

Of the inorganic salts of iron, we have:

1. The salts of the mineral acids;
 - a. Ferrous salts.
 - b. Ferric salts.
2. The salts of the vegetable acids:
 - a. The scale salts (ferrie).

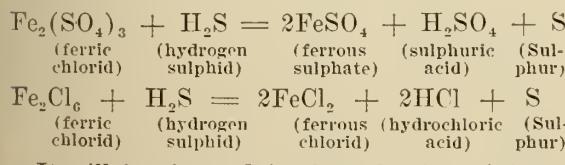
The salts of the mineral acids are more astrigent, more permanent, more easily affected by tannin and other iron precipitants, precipitate albumins more readily, perhaps more readily absorbed, and have a more irritant effect upon the digestive organs than the salts of the vegetable acids.

The irritation of the inorganic salts of iron is due to an extent to the liberation of the acid radicle in the process of reduction in the stomach and bowel, the degree of irritation depending on the acid liberated, being greater in the ease of the stronger mineral acids such as sulphuric, nitric and hydrochloric, and less in the vegetable acids such as tartaric, citric and acetic.

Inorganic salts of iron are supposed to be reduced in the alimentary tract:

1. To ferrous salts (especially ferrous chlorid in the stomach).
2. To alkaline albuminates of iron (in the bowel). This reduction is due:
 1. To the presence of hydrochloric acid in the stomach.
 2. To organic substances present which act as reducing agents.
 3. To the presence of hydrogen sulphid and other sulphur compounds.

The reaction with hydrogen sulphid may be illustrated as follows:



It will be observed in the reduction of ferric salts of iron that ferric are changed to ferrous salts, and that acid is liberated. This is true

with all the official ferrie salts of iron with the exception of the carbonate.

If ferrous carbonate is exposed to the air it undergoes oxidation forming ferric subcarbonate, which is really a mixture of ferric carbonate and ferric oxid, having a hypothetical formula only, and which is almost incapable of reduction in the alimentary tract.

The above facts render it very important when the carbonates of iron are administered that the preparations be fresh or well protected from the air or other oxidizing agents; otherwise we get but little assimilation of iron.

In order to preserve the ferrous carbonate the official preparations are incorporated with sugar, syrup, glycerin or honey. The best method of preserving the carbonate is to dissolve ferrous sulphate and some alkaline carbonate in anhydrous glycerin, and, since chemical reaction will take place only in the presence of water, this solution can be kept and mixed with water when desired, always giving a fresh preparation of ferrous carbonate.

The scale salts of iron seem to be intermediate products between the organic and inorganic preparations. They possess but slight irritating action; are miscible in neutral, alkaline or acid solutions, and are but slightly affected by the iron precipitants. Those scale salt preparations containing alkaloids are not chemically compatible with alkaline solutions, as the alkalies neutralize the alkaloidal salts with the formation of the alkaloid which is insoluble and forms a microscopic precipitate.

The following are the official ferrous salts and preparations of iron:

1. Sulphates:
 - a. Ferri sulphas.
 - b. Ferri sulphas exsiccatus.
 - c. Ferri sulphas granulatus.
2. Carbonates:
 - a. Ferri carbonas saccharatus.
 - b. Mistura ferri composita (Griffith's mixture).
 - c. Massa ferri carbonatis (Vallet's mass).
 - d. Pilula ferri carbonatis (Blaud's mass).

In the above carbonates ferrous sulphate combines with the alkaline carbonate or bicarbonate to form ferrous carbonate and the corresponding neutral sulphate.

3. Iodides:
 - a. Syrupus ferri iodidi.
 - b. Pilulae ferri iodidi.
- The syrup of the iodidi of iron is acid in reaction, diluted hypophosphorous acid being used in its preparation. It can, however, be prescribed with Fowler's solution, as neither the acid or

alkali are enough in excess to cause precipitation, i. e., the alkali of the one neutralizes the acid of the other, forming a comparatively neutral solution. In the pill reduced iron and iodin combine to form ferrous iodid. These pills should always be freshly prepared, as the iron readily oxidizes, becoming ferric iodid, which is very difficult of assimilation.

The following are the official ferric salts and preparations of inorganic iron:

I. SALTS OF THE MINERAL ACIDS.

1. Chlorids:

- a. Ferri Chloridum.
- b. Liquor Ferri Chloridi.
- c. Tinctura Ferri Chloridi.

2. Sulphates:

- a. Ferri et Ammonii Sulphas.
- b. Liquor Ferri Tersulphatis.
- c. Liquor Ferri Subsulphatis (Monsel's solution).

3. Hydroxids:

- a. Ferri Hydroxidum.
- b. Ferri Hydroxidum Cum Magnesii Oxo.

4. Hypophosphites:

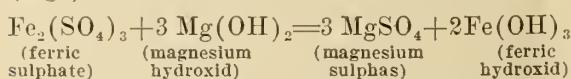
- a. Ferri Hypophosphis.

The prefix *ter* means over or above and indicates that the substance contains a large amount of the sulphate radicle, as $\text{Fe}_2(\text{SO}_4)_3$. Such preparations of the sulphates are exceedingly irritant, so much so that the liquor ferri tersulphatis is never used internally. The prefix *sub* means under or below and indicates that the substance contains a less amount of the sulphate radicle, as Fe SO_4 . Such preparations of the sulphates are not so irritant, but, as all sulphates are irritant, care must be taken in using liquor ferri subsulphatis, especially internally.

In the formation of the ferric hydroxid with magnesium oxid, the magnesium oxid is first mixed with water, which results in the formation of magnesium hydroxide.



The magnesium hydroxid is then mixed with a solution of ferric sulphate (liquor ferri tersulphatis diluted three times with water), which results in the formation of ferric hydroxid with magnesium sulphate plus such magnesium oxid (Mgo) as is in excess of the chemical reaction.



The name of ferric hydroxid with magnesium oxid indicating a mixture is a misnomer, and is

not made by mixing ferric hydrate with magnesium oxide, but is formed by chemical reaction as is seen above, and contains only such magnesium oxide (Mgo) as is in excess of the chemical reaction.

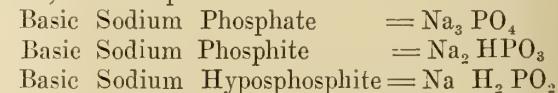
The above preparation is known as the *arsenic antidote*, and should always be freshly prepared when needed.

Its chemical and physical action as an antidote is as follows:

1. The formation of insoluble ferrous arsenite.
2. The formation of insoluble magnesium arsenite.
3. The cathartic effect of the magnesium sulphate.

(This last action is of minor importance, as it should always be followed by an emetic.)

The prefix *hypo* in ferri hypophosphis means having less oxygen than the phosphate or phosphite, for example:



The hypophosphites are very weak, unstable compounds, and therefore easily broken up, for which reason they carry their component elements to the system in a form which is more readily assimilated.

II. SALTS OF THE VEGETABLE ACIDS, "SCALE SALTS."

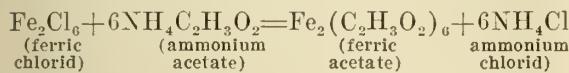
1. The following *Scale Salts* of iron and preparations containing them contain *no alkaloids*, and may be prescribed in neutral, alkaline or acid solutions:

- a. Ferri Citras.
- b. Ferri et Ammonii Citras.
- c. Vinum Ferri.
- d. Ferri et Ammonii Tartras.
- e. Ferri et Potassii Tartras.

2. The following *Scale Salts* of iron and preparations containing them contain *alkaloids*, or are *acid* in reaction, and may be prescribed in neutral solutions, or with solutions of weak vegetable acids:

- a. Liquor Ferri et Ammonii Acetatis (Basham's mixture, acid).
- b. Ferri et Quininæ Citras.
- c. Ferri et Quininæ Citras Solubilis.
- d. Vinum Ferri Amarum.
- e. Ferri et Strychninæ Citras.
- f. Glyceritum Ferri, Quininæ et Strychninæ Phosphatum.
- g. Syrupus Ferri, Quininæ et Strychninæ Phosphatum.
- h. Elixir Ferri, Quininæ et Strychninæ Phosphatum.
- i. Ferri Phosphas Solubilis (acid).
- j. Ferri Pyrophosphis Solubilis (acid).

The solution of iron and ammonium acetate (Basham's mixture) belongs distinctly to the vegetable salts of iron. It is not a double salt, but is made by adding the tincture of ferric chlorid to a solution of ammonium acetate, which results in the formation of ferric acetate and ammonium chlorid.



The solution is acidified by the use of dilute acetic acid to prevent the precipitation of any ferric hydroxide (brown color sometimes noticed in a poorly prepared preparation) from a poorly made solution of ammonium acetate. *It must not be dispensed with alkalies.*

The following are insoluble salts and preparations of inorganic iron, and may be administered in powders, pills or mixtures:

1. Ferrum Reductum.
2. Ferri Carbonas Saccharatus.
3. Mass Ferri Carbonatis (Vallet's mass).
4. Pilulae Ferri Carbonatis (Blaud's mass).
5. Ferri Hydroxidum Cum Magnesii Oxido (arsenic antidote).

The following are solid, soluble inorganic salts of iron:

1. Ferrous Salts:
 - a. Ferri Sulphas.
 - b. Ferri Sulphas Granulatus.
 - c. Ferri Sulphas Exsiccatus.
 - d. Pilulae Ferri Iodidi.
2. Ferric Salts—"Crystal":
 - a. Ferri Chloridum.
 - b. Ferri et Ammonii Sulphas.
 - c. Ferri Hypophosphis.
3. Ferric Salts—"Seale":
 - a. Ferri Citras.
 - b. Ferri et Ammonii Citras.
 - c. Ferri et Quininæ Citras.
 - d. Ferri et Quininæ Citras Solubilis.
 - e. Ferri et Strychninæ Citras.
 - f. Ferri et Ammonii Tartras.
 - g. Ferri et Potassii Tartras.
 - h. Ferri Phosphas Solubilis.
 - i. Ferri Pyrophosphis.

The following inorganic salts and preparations of iron are the most commonly used:

1. Ferrum Reductum (insoluble).
2. Ferri Carbonas Saccharatus (insoluble).
3. Pilulae Ferri Carbonatis (Blaud's pills, insoluble).
4. Massa Ferri Carbonatis (Vallet's mass, insoluble).
5. Pilulae Aloes et Ferri.
6. Ferri et Potassii Tartras (soluble).

7. Ferri et Ammonii Citras (soluble).
8. Tinctura Ferri Chloridi.
9. Syrupus Ferri Iodidi.
10. Liquor Ferri et Ammonii Acetatis (Basham's mixture).

11. Elixir Ferri Quininæ of Strychninæ Phosphatum.

The following salts and preparations are used mainly externally:

1. Ferri Chloridum.
2. Liquor Ferri Chloridi.
3. Liquor Ferri Subsulphatis.
4. Liquor Ferri Tersulphatis.
5. Ferri Hydroxidum Cum Magnesii Orido.

Most of the medicinal iron passes through the bowel unabsorbed. A very small amount of inorganic iron undergoes reduction in the bowel to an albuminate of iron as explained above, and may be absorbed, other portions are absorbed as inorganic iron and undergo further reduction in the spleen and liver. When it is remembered that normally there are only about 39 grains of iron in the body, it may be readily seen that but an infinitesimal portion of medicinal iron is absorbed.

SUMMARY.

1. Inorganic iron is more efficient than organic iron.
2. An infinitesimal amount of medicinal iron is absorbed.
3. The salts of the mineral acids are acid in reaction and may be prescribed in acid solutions.
4. The salts of the vegetable acids, "scale salts," are generally neutral in reaction, and may be prescribed in neutral, alkaline or acid solutions.
5. Those preparations of "scale salts" containing alkaloids, or that are acid in reaction (3), cannot be prescribed in alkaline solutions.
6. The insoluble salts of iron are more efficient.
7. One of the most valuable properties of medicinal iron is the removal of decomposition products from the bowel, a property belonging exclusively to inorganic iron.

THE 1910 session of the Indiana State Medical Association will be held in Fort Wayne. The members of the Association will remember the splendid entertainment afforded when the Association met at Fort Wayne, in 1896, and it goes without saying that the medical profession of the metropolis of Northern Indiana is now better prepared than ever to entertain the State Association in a creditable manner.

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EDITORIALS

THE TERRE HAUTE SESSION

The sixtieth annual session of the Indiana State Medical Association, held at Terre Haute, Oct. 7 and 8, 1909, was one of the most successful sessions, from every point of view, in the history of the Association. While the attendance was large, it was not record-breaking, and it was thoroughly representative of the various sections of the state.

The scientific program was one of unusual excellence. As might be expected, the program committee met with considerable embarrassment in their efforts to select a limited number of papers from a very large number that were offered for the program without creating a feeling that partiality had been shown or that any error in judgment was exhibited in the selection of material. But the quality of the program was such that it redounded to the credit of the essayists and the program committee, and the effort to select for the program only contributions of recognized merit is worthy of commendation. In limiting the number of papers to five for each meeting of each section, the committee followed a plan that is worthy of continuation, as it permitted more discussion, which is the most valuable feature of any meeting. For the most part the discussions were liberal and of a high order of merit.

The symposium on cardiovascular diseases was one of the most appreciated features of the program, and those who took part in it are deserving of special commendation for the thoroughness and skill with which they presented the various subjects. The exhibition of clinical cases showing types of myocardial lesions was an innovation and proved to be one of the most instructive features of the entire session. Dr. Kimberlin, who went to the trouble and expense of bringing the patients before the Association, and so ably discussed the features pertaining to each case, is deserving of praise for the treat he gave those who heard him. In like manner all those who took part in the symposium are to be congratulated upon having given such an interesting and in-

structive feature to the session. It may also be said that all of the papers on the program were of unusual merit and showed care and thought in preparation.

The address on heredity and disease, by Dr. Joseph Collins, of New York City, the guest of the Association, was one of the best addresses ever delivered before the Association. This, in connection with the splendid address of Dr. Kahlo, the president of the Association, made the evening meeting a most interesting and instructive feature of the session.

The purely business affairs of the Association were well taken care of by three meetings of the House of Delegates, and, for the first time in the history of the Association, these meetings did not conflict with the scientific meetings. The rule requiring the publication of committee reports in *THE JOURNAL* previous to the annual session, thus doing away with the necessity of having the reports read before the House of Delegates, very greatly lessened the time required for the meetings of the House. The work was further expedited by referring the recommendations of the standing committees to special committees of the House for consideration.

The effort to lengthen the session to three days was defeated, but approval was given to the plan of holding the sessions in the fall instead of in the early summer.

The appointment of a standing committee on credentials will do away with the practice heretofore prevailing of permitting members of the Association, who have not been duly elected as delegates, to take part in the proceedings of the House.

The appointment of a committee for the purpose of thoroughly considering and investigating the subject of medical defense, as urged by President Kahlo, is in keeping with the spirit of medical organization which aims to care for the best interests of the members of the Association. Medical defense in malpractice suits is now furnished the members of several state organizations by their respective associations, and has been pronounced a success. Indiana should not be behind the procession in this matter of furnishing all the possible benefits to its members.

The return to the original provision of the Constitution requiring a meeting of the House of Delegates on the day preceding the day fixed as the first day of the annual session is a wise move. The member who accepts an election as delegate to the Association should not only be willing to devote a little extra time to the Association, but should consider it his duty to do so, and be willing to go to the annual session a day earlier.

The business affairs of the Association will be best served by having a special day for one of the meetings of the House.

The resolution commending the work of the Indiana State Board of Health in its work pertaining to the enforcement of the pure food and drugs law, and also endorsing the work of Dr. Harvey W. Wiley, was entirely appropriate, as also the feature of the resolution which neither condemned nor approved the decision of the referee board appointed by ex-President Roosevelt to consider the question of food adulteration. The subject of food adulteration is worthy of further investigation before positive action can be taken upon certain phases of the question.

The amendment to the Constitution providing that no delegate shall be eligible to any office except that of councilor is worthy of adoption, but the provision requiring that the councilors shall be elected by the respective district societies, while not objectionable, cannot be considered necessary, as the councilors are already selected by the delegates from the various county societies of the respective districts and the selection approved by the House of Delegates.

The work of the committee on arrangements was well done. The Knights of Pythias temple, where all of the meetings were held, was well adapted to the purpose, with the possible exception that the room assigned for meetings of the section on surgery was entirely too small. The location of the registration bureau in the basement in the room occupied by the exhibitors was satisfactory, and kept the noise and confusion, which always occurs at the registration bureau, away from the rooms where the scientific meetings were held.

The usual number of exhibitors were on hand, and, for the first time in the history of the Association, no exhibitor was permitted to exhibit or advertise in any way a product not approved by the council on pharmacy and chemistry of the American Medical Association.

The "big smoke" given at the Phoenix Club on Wednesday night preceding the first day of the session was a very enjoyable affair, and was a feature which drew a large number of members of the Association to Terre Haute, who, except for this entertainment, would probably have delayed their coming until the following day, and thus missed a part of the scientific proceedings. The vaudeville performance at the Varieties Theater, following immediately after the evening session devoted to the addresses of Drs. Collins and Kahlo, was entertaining and appreciated by the large audience of medical men and their wives and friends who attended.

Fewer ladies than usual attended the Terre Haute session, but the committee on arrangements, assisted by the wives of members of the Terre Haute profession, provided splendid entertainment for all visiting ladies.

The political "wire-pulling" and "legging for office" which is a feature of some medical conventions was not a feature at the Terre Haute session, and the quietness and freedom from political activity with which the elections were conducted met with the appreciation and approval of all the members of the Association. In fact, never before has there been greater interest manifested in the real function of the Association, which is the scientific advancement of the members.

The weather was delightful throughout the time of the session, and many members remarked that the fall sessions are so much more preferable to those held in mid-summer when the stifling heat oftentimes seriously interferes with the interest which the members would otherwise take in the work of the Association.

Everything considered, the Terre Haute session can be remembered as one of the most successful in the history of the Association. The unanimous selection of Fort Wayne as the next place of meeting gives the physicians of the northern part of the state an opportunity of showing the medical profession of Indiana what can be done in the way of keeping up the standard that has been set by our Terre Haute friends. As the Fort Wayne Medical Society is one of the largest and most prosperous organizations in the state, the members of the State Association can look forward to a repetition of the successful session just held.

PRESENCE OF TUBERCLE BACILLI IN BLOOD QUESTIONED.

In view of the enthusiasm which greeted Rosenberger's results of practically universally positive blood findings in tuberculosis, it is indeed interesting to watch the pendulum begin on its return journey.

After Rosenberger came forth last winter with the declaration that tubercle bacilli are present in the circulating blood even in cases of chronic and localized tuberculosis, one enthusiast boldly asserted that this was "the most important and far-reaching discovery as to tuberculosis since Koch's own discovery of the bacillus 27 years ago." Even Ewart¹ believes that confirmation of the occurrence of living bacilli in the blood of practically every tuberculous patient will

1. *Progressive Medicine*, September, 1909.

relegate to insignificance all other methods of diagnosis as relatively uncertain and late. And Charles E. P. Forsyth points out that "our ideas as to the use of tuberculin vaccinotherapy must be considerably modified." By a slight modification of Rosenberger's method Forsyth claimed to have confirmed the existence of the bacillemia in 12 cases.

On the other hand, when such men as Ravenel, Smith, Burnham and Lyons, employing the same technic, fail to corroborate Rosenberger's findings, we should observe a discrete reticence in accepting them.

And now comes Brem² with apparently well-authenticated proof that there occur in distilled water certain acid-fast bacilli, morphologically identical with the tubercle bacillus, and with the timely suggestion that possibly the organisms isolated by Rosenberger with such uniformity in the blood smears from the suspected tuberculous cases are in reality these same acid-fast bacilli contained in the distilled water used in laking the blood, according to the technic used by Rosenberger. In all, some twenty-six positive examinations were made, including cases of pulmonary tuberculosis, cervical and inguinal adenitis, pleurisy with effusion, miliary tuberculosis, intestinal hemorrhage of obscure origin, arthritis of hip-joint, and other obscure fevers, before Brem's suspicions became aroused, although he was finding these tubercle-like bacilli quite uniformly in the blood, pleural effusions, stools and urine of practically all cases examined by this technic. Finally, to clinch the positive blood-findings, the heart's blood of five guinea-pigs was drawn for examination. The next day four of these pigs were intraperitoneally inoculated with the sediment from the blood of two positive and two suspected cases of pulmonary tuberculosis. The heart's blood showing on examination these tubercle-like bacilli, one of the pigs was killed, but no signs of tuberculosis were found despite the fact that at autopsy the heart's blood again revealed the presence of these tubercle-like bacilli. The other four pigs remained healthy for four months, at which time two more were killed, but at autopsy showed no findings of tuberculosis. The suspicions of the observer being aroused, he caused some smears of the sediment of the laboratory jar containing distilled water to be made with egg albumen, and repeatedly found many of these same bacteria, although nothing could be found in the egg albumen alone. Brem believes these bacilli to belong to the grass family and accounts for their presence in his laboratory by

the residence therein of guinea-pigs, a condition he believes to be common to all laboratories in which animals are kept. One result of Rosenberger's animal experiments, 30 guinea-pigs showing acid-fast bacilli in the blood suspensions while having no tuberculous lesions, Brem believes to be strong evidence in favor of contamination rather than of the presence of tubercle bacilli in the circulating blood; and, as he suggests, it is unfortunate that the blood of these animals was not examined before inoculation, in order to rule out such possible contamination. Indeed, Brem very conservatively and wisely concludes that, in examining blood, urine, stools, sputum and exudates for tubercle bacilli, the greatest care should be used to exclude contamination of water and all solutions used, with members of the acid-resistant group of bacilli (whether dead or alive). And he justly asserts that "there is as yet no conclusive proof of the frequent continued presence of tubercle bacilli in the circulating blood."

It is unfortunate that the simple test of inoculating tubes of ordinary culture media with some of the laked blood, known to contain the acid-fast bacilli, has not been applied. Under such circumstances a growth of the grass bacillus would probably result while none would obtain from the tubercle bacillus.

THE NATURE OF ARTERIOSCLEROSIS.

A most interesting discussion of the process obtaining in the production of arteriosclerosis, is that by Dr. J. George Adami, in the October, 1909, issue of the *American Journal of Medical Sciences*. He declares that the more autopsies one performs, the oftener does he find arteriosclerosis as the fundamental morbid process in deaths after the age of 40 years. Eliminating the infections and malignancy, there remains that galaxy of cardiovascular disturbances in which the terminal event is always the result of the one common lesion, viz., arteriosclerosis; whether the localization be in any of the various aortic areas, its larger branches, the renal, cerebral or arteries of the extremities. Likewise he finds the name arteriosclerosis not altogether satisfactory, because the lesion is not always the same, but yet prefers it to the terms atherosclerosis or arteriocapillary fibrosis, since after all the sclerotic process in the arteries is the most constant and important phenomenon.

The three types manifested in the aorta or vessels of the elastic type are as follows: (1) The most common form is the ordinary nodose arterio-

2. *Journal of the A. M. A.*, Sept. 18, 1909.

sclerosis, which shows as a thickening at or around the origins of the side arteries, white or yellowish, and notably affecting the origins of the intercostal arteries. This form most commonly passes into atheroma and calcification of the internal plaques. (2) The second form is the so-called senile variety, with hardened or pipe-stem radials often present, but in the aorta a complete absence of nodose, intimal thickening. Instead the aorta is dilated, its wall thinned, and the vessel tortuous. The common iliacs and carotids are the seats of slight depressions, but the smaller arteries are markedly sclerotic with intimal fibrosis, as well as fibrosis of the middle and perarterial coats. The cause of the hardening is not the sclerosis, but rather the essential change is a calcification of the media, often preceded by a medial hypertrophy. This so-called Moenckelberg's sclerosis is relatively uncommon save in combination with the first type described, which combination is the commonest lesion in elderly people, and in this there is associated with the atheromatous plaques common to the abdominal aorta, a faint saccular giving way in the common iliacs and carotids. (3) The syphilitic group or that great type in which the ascending aorta or arch, nodes lie in groups which, instead of undergoing calcareous or atheromatous change, show later a scarring and central puckering. The primary lesion here is a subacute mesaortitis with small-celled infiltration around branches of the vasa vasorum and absorption of the elements proper of the media. Simultaneously, there is intimal hypertrophy with resulting necrotic change and degeneration of the deeper portions of the overgrowth and an underlying inflammatory granulation tissue advancing new capillaries into the necrotic areas. Hence the absorption of degenerated material and its replacement by cicatricial tissue. A paradox also exists in connection with this syphilitic type, in that while the syphilitic virus leads to intimal hypertrophy, at the same time it leads to a characteristic lack of such hypertrophy, a thinning of all the coats and actual aneurysmal production, 60 to 85 per cent. of all aneurysms being to-day ascribed to syphilis.

Regarding the arteriosclerotic change in the other arteries, the author would divide the vessels into the muscular arteries and the arterioles. In the former the same relative changes may be seen as in the aorta, except that the areas of degeneration and intimal proliferation are of necessity so much smaller that it is fair to presume that they occur more as a result of the cutting off of their lymph supply by the development superficially of layer after layer of dense, new con-

nective tissue; hence calcification more commonly affects the media, the coat which exhibits more obvious alterations in this type. Passing to the arterioles, there is found in one class of cases a muscular hypertrophy of the middle coat as the dominating change; while in another series of cases fibrosis is the most evident alteration; fibrosis affecting the intima, the muscular coat of the media and the adventitia. Another state seen particularly in such infections as tuberculosis, syphilis and chronic glanders, presents an active cellular proliferation of the intimal endothelium leading to an obliterative endarteritis, the author agreeing with Baumgarten that the endothelium directly gives origin to the connective tissue overgrowth of these arterioles.

In syphilitic aortitis is a granulomatous condition or small-cell infiltration immediately surrounding the vasa-vasorum in the media—a syphilitic mesaortitis involving primarily the outer half or two-thirds of the aortic media. Certain vasa only are affected and several observers have discovered the spirocheta in the aortic lesions. Consequent upon this infiltration, there is a dissolution of the elements of the media, with such thinning that the loss of this sustaining coat readily leads to aneurysm. More common, however, than aneurysmal formation is the production of intimal thickening which follows as a compensatory hypertrophy, a regular development of layer after layer of new connective tissue of non-inflammatory origin, but the result rather of a *strain hypertrophy*. Proof that that is the origin of such hypertrophy is offered by the connective tissue hypertrophy which took place in the segment of vein which Carrel transplanted into the cat's carotid artery. Should the destruction of the media be so extensive or so acute as to produce *overstrain* instead of *strain* there would be atrophy in place of hypertrophy, as in aneurysm.

Regarding the effects of syphilis upon the aorta, then, the author draws the following conclusions: "(1) The primary disturbance is a granulomatous, inflammatory degeneration of the media. (2) This leads to a local giving way of aorta. (3) If this be moderate it results in a strain hypertrophy of the intima and of the adventitia, with the development of a nodose intimal sclerosis. (4) If it be extreme, there results on the contrary an overstrain atrophy of the intima and aneurysm formation. (5) The intimal nodosities are here not of inflammatory type and are non-vascular, although with the progressive laying down of layer upon layer of connective tissue on the more internal aspect of the intima, the earlier

and deeper placed layers of new tissue gain less and less nourishment, and so are liable to exhibit fatty degeneration and necrosis. (6) These products of necrosis exert a chemiotactic influence upon the nearby vessels of the medial granulation tissue, with, as a result, (a) secondary and late entrance of new vessels into the early and deeply placed atheromatous area; (b) absorption of the necrotic products; (c) replacement by granulation tissue; and (d) depression and scarring of the sclerotic nodules so characteristic of syphilitic sclerosis."

That the ordinary arteriosclerosis of advancing life likewise exhibits a primary giving way of the media, can be demonstrated both histologically and experimentally. Histologically, Klotz has shown that after the age of 35, the intervening muscle between the elastic lamellæ of the aortic media begins to show fatty degeneration, more marked after 50. Then one of two processes may occur: either the fatty gives place to a calcareous degeneration, or the muscle fibers undergo complete absorption, or perhaps more frequently both processes obtain. The calcification may extend to the elastica, which then loses its elasticity and becomes stretched. Experimentally, Klotz produced definite arteriosclerosis with connective-tissue thickening of the intima of the typical kind in the aorta and carotid arteries of a rabbit, by suspending him by the hind legs three minutes daily for 120 days.

So that whether the strain is produced by a giving way of the media because of disease or because of increased blood pressure—so-called *hyperpiesis*—the result is the same; i. e., the dominant primary event in the arteriosclerotic process is a localized, or it may be a diffuse, weakening of the arterial wall, and especially of the media. If the strain induced upon the remaining coats be not excessive, there results the connective tissue overgrowth that is the characteristic lesion of arteriosclerosis.

EDITORIAL NOTES

IT is now President Kennedy. We know that Dr. Kennedy still calls Shelbyville his home town, and yet, in consideration of the fact that Dr. Kennedy maintains an office in Indianapolis, it may be that our Indianapolis friends will claim him.

THE "big smoke" was the principal social feature of the Terre Haute session, and it was a decided success. It was the means of bringing

out members of the Association to the session early and it started the session with a spirit of good cheer.

"HEREDITY AND DISEASE," the address delivered by Dr. Joseph Collins, of New York City, before the Indiana State Medical Association at Terre Haute, appears in this issue of THE JOURNAL. It is a notable address and should be read by every member of the Association who did not hear it in Terre Haute.

THE meeting of the county society officers held in Terre Haute was not as well attended as it should have been, but the papers and discussions will be helpful to those who heard them. We hope that next year the meeting of county society officers will be better attended and that a live, interesting program, concerning ways and means of improving the size, attendance and character of work of the county societies, will be freely discussed.

IN this period of advanced prices and increased cost of living it may not be out of place to call attention to the justice of increased fees for the doctor. With increased requirements for the practice of medicine, and with the attending increased cost in securing a medical education, it is but a matter of justice for the doctor to demand increased fees for services. We are all the more justified in demanding larger fees to keep abreast of the increased incomes of people in all other walks of life.

Another thing which should receive the serious consideration of all doctors is the question of presenting monthly statements to any and all patrons. There is absolutely no reason why doctors should not be as systematic in the presentation of statements as the merchant, and be equally as urgent in his demands that payment of indebtedness shall be reasonably prompt. Doctors have always shown and always will show leniency where leniency is due, but for those who are able to pay the rule should be that the payment must be prompt.

THE councilor for the sixth district suggests that every medical society in the state ought to hold at least twelve meetings during the year, and one of those meetings should be a social meeting, consisting of either a picnic at some resort or an annual dinner. We believe that every doctor in the state ought to be sufficiently interested in medical progress to attend at least one meeting

of his county society during each month, and no county society can be considered very active unless the meetings are held at least that often. Some of the more progressive medical organizations hold meetings oftener than once a month, and the large societies, like those at Indianapolis, Fort Wayne and Terre Haute, have meetings once a week. It all depends upon the kind of work the society does as to whether or not meetings will be successful if held often, and the life of the society depends very largely upon the energy and enterprise of the secretary. Good programs will bring out good attendance and good discussion. Good programs may be secured by an energetic secretary, and if the program cannot be supplied by members of the local organization it is always possible to import help from other counties, and in this way gradually stimulate interest and activity on the part of those in the local organization who are apathetic.

DR. KAHLO, in his presidential address, recommends that the State Association adopt some plan of medical defense for its members. We have always felt that medical defense is best conducted by companies organized for the purpose, and we still believe this to be true. However, there are certain advantages to be obtained from medical defense supplied by the State Association, and one of the strongest arguments in favor of adopting some such plan as outlined by Dr. Kahlo is that the moral influence of cooperative defense will have a strong tendency to limit the number of cases of malpractice. Probably nine-tenths of all the suits for malpractice are instigated, either directly or indirectly, by some jealous or evil-minded medical man. If all the members of the State Association are interested in medical defense, and help to pay for it, there will be less tendency on the part of any of the members to encourage suits. Then, again, for the medical man who for one reason or another does not care to pay for the policies in any of the recognized medical defense companies, the protection afforded by the State Association is just so much added to the benefits derived from membership in the Association, and at insignificant cost. For the busy practitioner, who really desires the best and most effective protection and defense, the old-established medical defense companies, who have not only carefully studied the question in all its phases but have had most experience in the work, will not appeal in vain. Such medical men can well afford to favor medical defense on the part of the State Association for the benefit of the less favored practitioners, while yet retaining policies in the medical defense companies.

WHILE we are talking about medical inspection of schools it may not be amiss to talk about the medical inspection of public conveyances, and especially our railroad trains. The average smoking car on any of the railroad trains in this country is not only a disease-breeding place, but one that is repulsive to the tastes of anyone who appreciates cleanliness. The air is usually reeking with tobacco smoke and emanations from tobacco spit, filthy catarrhal discharges, cigar stubs, decaying fruit, etc. The condition is enough to nauseate any healthy individual, to say nothing of being a prognosticator of disease. There is no reason why the traveling public should not have clean and healthy public conveyances in which to ride, and if our public health boards would occasionally prosecute some of the corporations for infraction of public health laws there would be less complaint about filthy and unhealthy railroad trains. Incidentally it may be said that it might prove a good advertising venture for some progressive railroad corporation to inaugurate a sanitary inspection of coaches and advertise the fact. It is not enough that railroad coaches should be cleaned with a vacuum cleaner, scrubbed and disinfected at terminals. The matter of keeping cars clean should be followed up while the car is en route. Then, too, the passenger who is guilty of a misdemeanor in spitting on the floor, or otherwise adding to the insanitary and unhealthy conditions in any public conveyance, should be promptly arrested and properly punished.

IN brief the work of the house of delegates at the Terre Haute session resulted as follows:

1. The appointment of a standing committee on credentials.
2. The passing of the amendment to the by-laws providing that delegates present credentials to the committee on credentials at least ten days before the first meeting of the House of Delegates, and permitting the acceptance of credentials of the alternate delegate on the day of the first meeting of the House of Delegates.
3. Motion prevailed that the provisions of the Constitution be strictly followed. Heretofore there has been some laxity in the manner of representation in the house of delegates.
4. The appointment of a committee to consider and report upon the necessity of medical inspection of school children throughout the state of Indiana.

5. The appointment of a committee to endeavor to secure funds for the maintenance of the state tuberculosis hospital.
6. Decision to make the next session one of two days only.
7. Defeat of the project to establish a section devoted to diseases of the eye, ear, nose and throat.
8. Providing that no more than five papers for each meeting of each section shall be accepted for the program.
9. Providing that each paper considered by the program committee shall have been read before and received the endorsement of the county medical society of which the essayist is a member.
10. Appointment of a committee for the purpose of thoroughly considering and investigating the subject of medical defense from a legal standpoint, and to determine if it is feasible for the Association to establish a fund for the purpose of defending malpractice suits brought against members of the Association. Committee to report next year.
11. An amendment to the by-laws providing that representation in the House of Delegates shall be one to every fifty or major fraction thereof, in each county society, but that every county society shall be entitled to at least one delegate.
12. The appointment of a committee to confer with the state board of medical registration and examination with reference to the advisability of raising the examination requirements for license in Indiana.
13. Providing that colored physicians shall secure admission to membership in the Association through the usual channels and in the same manner as white physicians.
14. Providing that the first meeting of the House of Delegates shall be at 8 p. m. on the day before that fixed as the first day of the annual session.
15. The passing of a resolution commending the work of the Indiana State Board of Health in its work pertaining to the enforcement of the pure food and drugs law; refusal to accept the decision of the referee board appointed by ex-President Roosevelt as final; recommending that the president of the United States and secretary of agriculture authorize further investigations on the subject of food adulteration, and emphatically endorsing the work of Dr. Harvey W. Wiley in his efforts to obtain for the people pure foods and pure food legislation.
16. An amendment to the Constitution providing that no delegate nor councilor shall be eligible to any office except that of councilor, and

providing that the councilors shall be elected by the respective district societies. (To lie over until next session.)

17. The appointment of delegates to attend the next convention for the revision of the Pharmacopeia.

18. Election of officers.

19. Selection of Fort Wayne as the place for the 1910 session of the Association.
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THE American Association of Obstetricians and Gynecologists held its twenty-second annual meeting at the Hotel Anthony, Fort Wayne, Sept. 21, 22 and 23, 1909. While the membership attendance was not as large as usual, the profession in and around Fort Wayne manifested an interest in the proceedings that was highly gratifying to those in charge of the meeting. This latter fact was said to be due alike to the live interest in medical affairs indigenous to the local profession in the Fort Wayne district and to the efforts put forth by the chairman of the committee on arrangements, Dr. Miles F. Porter, of Fort Wayne, Dr. William Warren Potter of Buffalo, who has so faithfully served the society as secretary since its birth, was re-elected, and Dr. William Humiston of Cleveland was succeeded as president by Dr. A. O. Miller of Syracuse. Dr. Maurice I. Rosenthal of Fort Wayne was elected to fellowship in the society. Syracuse, N. Y., was selected as the meeting place for next year. The following was the program of the meeting:

"Caries of the Hyoid Bone," J. E. Cannaday, Charleston; "Advantages of the Combined Intra- and Extraperitoneal Ureterolithotomy for the Removal of Stones from the Lower Ureter," Ernst Jonas, St. Louis; "Who Is Responsible for the Abdominal 'Junk' Necessitating Re-Operations?" Joseph Price, Philadelphia; "Observations on Blood Transfusion," John D. S. Davis, Birmingham; "Surgical Treatment of Tumors of the Bladder," John W. Keefe, Providence; "Malignant Tumor of Undescended Testicle," Orange G. Pfaff, Indianapolis; "Operative Enlargement of the Pelvis of the Non-Pregnant Woman," John N. Bell, Detroit; "Chylous Cyst of the Mesentery," Charles E. Congdon, Buffalo; "Embryo Abdominal Surgeon with Inadequate Preparation and Knowledge," J. H. Carstens, Detroit; "When Shall We Operate for Ruptured Ectopic Gestation?" Raleigh R. Huggins, Pittsburgh; "An Operation for Cystocele that Has Given Satisfactory Results," Francis Reder, St. Louis; "Artificial Anus Following Operation for Intussusception—Three Years Complete Occlu-

sion of Large Bowel—Method of Restoring Continuity," John Young Brown, St. Louis; "Partum Hemorrhage, with Two Quick Methods of Meeting the Emergency," Douglas H. Stewart, New York; "Nephrocoloptosis with Lantern Demonstration," Howard W. Longyear, Detroit; "Rupture of the Uterus During Labor," Ralph Waldo Lobenstine, New York (by invitation); president's address, "The Gilliam Operation for Retrodisplacement of the Uterus," William Henry Humiston, Cleveland; "Some Phases and Case Reports of Puerperal Sepsis," Hugo O. Pantzer, Indianapolis; "Specimen of Calcareous Degeneration of Fibroid Uterus," Walter B. Dorsey, St. Louis; "Ovarian Pregnancy at Term," Walter C. G. Kerchner, St. Louis; "Presentation of Specimens with Brief Reports," Joseph Price, Philadelphia; "How Can We Best Educate Women to Seek Early Relief from Carcinoma of the Uterus?" Carlton C. Frederick, Buffalo; "Some Observations on the Treatment of Uterine Cancer," L. S. McMurtry, Louisville; "Cesarean Section, Abdominal and Vaginal, Compared and Contrasted," Miles F. Porter, Fort Wayne; "Why We Have to Drain in Pelvic and Abdominal Surgery," Joseph Price, Philadelphia; "Drainage," J. F. Baldwin, Columbus; "A New Technic for Extirpation of the Rectum with Subsequent Sphincteric Control," Charles A. L. Reed, Cincinnati; "Operations Upon Handicapped Patients," George W. Crile, Cleveland; "A Study of Four Hundred and Thirty-six Operations on the Appendix," with remarks, Edward J. Ill, Newark; "The New Point in Diagnosis Between Appendicitis and Tubal Diseases," Robert T. Morris, New York; "Is the Routine Exhibition of the Pre-Operative Purge Defensible?" Edwin Walker, Evansville.

A most excellent banquet was served to the members and their guests on Wednesday, the 22d, at 7:30 p. m., at which toasts were responded to by several of the fellows and by the Hon. James Barrett and Mr. Fred B. Shoaff, representing the legal profession of Fort Wayne.

CORRESPONDENCE

APPEAL TO THE MEDICAL PROFESSION OF THE WEST AND SOUTH.

CINCINNATI, OHIO, Sept. 25, 1909.

To the Editor:—Up to the present time there has not been a concerted effort made to collect and preserve historical data in regard to the origin, evolution and personnel of our profession in this

part of our country. The result of this delinquency has been the total loss of much material that should have been preserved, especially pertaining to medical schools and societies, and biographical matter in connection with the practitioners and teachers of medicine of by-gone days. A good deal of material of this character is still obtainable if a systematic effort is made to locate and preserve it. It is in the possession of individuals, families and private libraries and will eventually be lost. *The Western Association for the Preservation of Medical Records* was organized in May, 1909, for the purpose of collecting the historical and biographical records of the profession of the West and South. We wish to preserve anything and everything pertaining to western medicine and medical men and are anxious to enlist the active help of every member of the profession who is in sympathy with our aims. We want everyone to become associated and identified with the work of our Association. There are no fees or obligations of any kind. We have made arrangements with the Lloyd Library, Cincinnati, Ohio, for the purpose of the proper housing of the material collected. The latter will be systematically arranged, catalogued and properly preserved so that it can be made available for research work. We are particularly anxious to obtain:

1. Medical journals published in the West and South prior to 1880.
2. Medical books or pamphlets written or published in the West.
3. Manuscripts and autographs of early western physicians.
4. Old diplomas and other documents of a medical character.
5. Proceedings of medical societies.
6. Reports of hospitals and other medical institutions.
7. Catalogues and announcements of western medical colleges of all "schools."
8. Biographies and portraits of western physicians.
9. Information and material of any kind pertaining to medicine and medical men and affairs in the West.
10. Curios of a medico-historical character.

All contributions should be sent in care of the Librarian. In view of the fact that we are performing a labor of love and have no funds, our friends and associates will readily understand why all contributions sent by express or freight should be prepaid so that no expense may accrue to the Association. The necessary expenses of the Association are at present being met by voluntary contributions to its organizers.

May we not count upon your active help and support? We would like to hear from every member of the profession who is interested in the proposed work.

C. A. L. REED, Chairman.
OTTO JUETTNER, M.D., Secretary.
A. G. DRURY, M.D., Librarian.

710 West Eighth street, Cincinnati, Ohio.

DEATHS

DR. JOSEPH J. SAUNDERS, living four miles northeast of Anderson, died suddenly from apoplexy at his home October 7, aged 60.

DR. EARL CARLTON SMITH, a graduate of the Eclectic College of Physicians and Surgeons, Indianapolis, 1893, died at the home of his sister in that city, September 19, from heart disease, aged 37.

DR. JOHN WILLIAMS, the oldest man in Clay county, died October 4, at the home of his sister near Bowling Green, from an acute attack of inflammation of the bowels. Dr. Williams was nearly 98 years old and had lived in Clay county more than seventy-five years.

DR. NELSON T. CHENOWETH, of Windsor, died on his 72d birthday anniversary, at his home, October 9, from acute asthma. Dr. Chenoweth was a veteran of the civil war, having been a member of the Forty-ninth Ohio volunteers. He was prominently identified with the Masonic and Odd Fellow lodges.

NEWS, NOTES AND COMMENTS

DR. STANLEY C. NEWLIN, of Anderson, has entered the mayoralty race.

DR. E. PADGETT spent part of his vacation in attending clinics in Chicago.

DR. JOHN I. METTS, Ossian, is reported to be critically ill with cerebral hemorrhage.

DR. CARLOS LANE has located at Kimmel, Noble county, where he will take up practice.

DR. A. W. BRAYTON spent his vacation with the artist, E. T. Steele, in Brown county, Indiana.

DR. F. W. BLACK, of Ligonier, has recently returned from a month's trip through the West.

DR. N. G. RIEFF, of Albion, is spending his vacation in northern Minnesota, fishing and hunting.

DR. CHARLES R. DANCER has been appointed medical inspector of the Fort Wayne public schools.

DR. F. R. CLAPP, of Ligonier, spent a part of July and August in New York doing postgraduate work.

DR. JOHN F. BARNHILL read a paper before the Otological Society of New York City on October 8.

DR. B. F. SNYDER, of Camden, was operated upon for acute intestinal obstruction on September 21, at Logansport.

DR. J. W. McCCLURE, formerly of Butlerville, has located at Milan. He and Dr. D. C. Roney have changed locations.

DR. J. J. KYLE, DR. W. N. WISHARD AND DR. THOMAS WAGNER, of Indianapolis, have returned from their European tour.

DR. THOMAS M. JONES, of Anderson, is now doing special work in the Vienna hospitals. He expects to return next May.

DR. OMER H. STEWART has been appointed pension examining surgeon at Huntington, vice Dr. L. B. Johnson, resigned.

THE thirty-seventh annual meeting of the American Public Health Association was held at Richmond, Va., Oct. 19 to 22, 1909.

DR. THOMAS B. EASTMAN has changed his office from 708 Indiana Pythian Building to 309 Pennway Building, Indianapolis.

DR. MARSHALL VARBLE has been given a license for the establishment of a maternity branch of the Jeffersonville hospital.

DR. J. L. GILBERT, of Kendallville, left for Baltimore on September 21, where he entered Johns Hopkins Hospital for a prostatectomy.

DR. MARY E. JACKSON, of Hammond, while making a professional call September 22, fell through a rotten porch and suffered a fracture of the left patella.

DR. JONAS STEWART, ex-president of the Indiana State Medical Association, is now preparing the historical data of the early physicians of Madison county.

DR. THOMAS B. EASTMAN has moved his office from 708 Indiana Pythian Building to the Pennway, corner of Pennsylvania and New York streets, Indianapolis.

THE Rush Medical College alumni held a reunion during the session of the Indiana State Medical Association, at Terre Haute, at a luncheon, Friday, October 8.

DR. AND MRS. LUTHER WILLIAMS, of Indianapolis, have left for the East, where Dr. Williams will take a post-graduate course at Johns Hopkins and other universities.

DR. JAMES R. LEWIS, of Indianapolis, was married to Miss Catherine Benninger on October 20. The at home announcement is for 813 South Noble street, after December 1.

DR. O. E. McWILLIAMS, of Anderson, has just returned from a few weeks' visit with his family at Rochester, Minn. He witnessed the operation on the late Governor John A. Johnson.

DR. EDWARD L. SWADENER has resigned as assistant physician at the Indiana reformatory

at Jeffersonville and has gone to South Dakota as physician at the Pine Ridge Indian agency.

RESPONDING to the appeals of the Evansville Antituberculosis Society, the Vanderburg county council, at its annual meeting, September 7, appropriated \$1,000 for the work against tuberculosis.

DR. A. C. KIMBERLIN, of Indianapolis, who returned from Europe a short time ago, has announced that he has retired from general practice and will now limit his practice to hospital and consultation work.

DRS. ALLISON MAXWELL, JOHN F. BARNHILL, PAUL B. COBLE AND CHARLES R. SOWDER will move their offices from 323 North Delaware street, Indianapolis, to Dr. Kitchen's new building, the Pennway, corner of Pennsylvania and New York streets.

THE licenses of Drs. Willis Farrel, Lee M. Barney and Burnhard J. Kowenstrot, Fort Wayne, are said to have been revoked August 11, by the state board of medical examination and registration, on the ground that the holders advertised to defraud the public.

DR. C. W. BURKET, of Warsaw, who has been soliciting stock subscriptions for a new Warsaw hospital, has recently said that enough has been subscribed to warrant the incorporation of the hospital. It has been decided to call the institution The Kosciusko Hospital.

THE annual session of the Indiana Association of Nurses met at the Y. W. C. A., Indianapolis, on Tuesday, October 5. The address of welcome was made by Dr. Edmund Clark. Several clinics were provided at the city hospital and the same officers were selected for the ensuing year.

DR. G. W. H. KEMPER, one of the best known physicians in Indiana, ex-president of the Indiana State Medical Association, and now acting as counselor for the eighth Indiana district, was nominated for mayor of Muncie October 5. Dr. Kemper will undoubtedly be elected, as he is very popular with both political parties.

SINCE the September issue of THE JOURNAL the Council on Pharmacy and Chemistry of the American Medical Association has acted on the following products:

Articles accepted for New and Nonofficial Remedies:

Mergal (Riedel & Co.).

Salipyrin (Riedel & Co.).

manufacture of butter to meet state and federal requirements; state laws affecting dairy interests, and city ordinances regulating the sale of milk; bovine tuberculosis; the tuberculin test; proper construction of dairy barns; methods of refrigeration; relative cost of production of clean and unclean milk, and the necessity for cooperation between health officers, milk inspectors, etc.

DR. JOHN EBERWINE, of Indianapolis, was married to Miss Myrtle E. Clark, daughter of Dr. J. W. Clark, at Economy, Ind., on October 20. The at home announcement is 145 E. 33d St., Indianapolis, after December 1. Miss Clark is a sister of Dr. Edmund Clark, the president of the board of health, Indianapolis.

IT is not often that physicians are given high political preferment. When this does occur it shows a versatility above the average and an ability which should be of comment. The commanding general of the United States army and chief of staff are at the present time physicians. It is understood that Muncie has honored herself also in placing Dr. G. W. H. Kemper to head one of the city tickets for mayor. Two nominations for council on this ticket are also physicians.

THE next meeting of the Eleventh Councilor District Medical Society will be held at Huntington, Ind., Thursday, Oct. 21, 1909. The morning session will be taken up with election of officers and other matters of interest to the profession. The literary and scientific program will begin at 1:30 p. m. A program of unusual interest is promised. The banquet will be served at 6 p. m. Physicians' wives are invited and the ladies will be entertained during the day—automobiling, a musicale and other social functions being provided.

ON September 7 and 8 the state board of health held at the state house, Indianapolis, its second annual convention of market milk men, butter makers, wholesale dealers in milk, milk inspectors, health officers, and all others interested in the production and distribution of sanitary milk. Among the chief questions considered were the production of clean and wholesome milk;

THE tuberculosis colony of the City Hospital grounds, Indianapolis, has been decreased by eight patients, who have been discharged as cured. These cures have been accomplished during the last six months, and show that the Indiana climate is favorable to the cure of tuberculosis. Not only has the treatment cured these patients, but it has taught them the proper way to live, and they will go forth telling others. They were all taken in during the incipient stage. Since Indianapolis now has 60-cent gas, it will be possible to keep the colony open the year round; each of the thirteen cottages will have gas, thus doing away with the smoke and dirt which results from coal fires. It is to be hoped that the same high percentage of cures will continue.

THE Indianapolis Medical Society opened its winter meetings with a banquet on Tuesday evening, October 5, in the Indiana Medical College building. The dinner was presided over by Dr. Theodore Potter, the president of the society, and various impromptu speeches were made, and a series of cartoons by Dr. E. J. Kyte, interne of the Methodist Hospital, were exhibited. Medical music was furnished by a trio, Drs. Lester Maxwell, E. G. Kyte and Fred Weyerbacher. This feature of having a dinner before the regular medical meeting has been very successfully carried out in Berlin. Every Saturday night at 7 o'clock the English and American physicians studying in Berlin meet at the Café Heidelberger, and after a light meal the regular meeting is held, which consists of one set speech by some noted authority, either German, English or American, after which each committee reports on the success of the various clinics. The association goes by the name of The Anglo-American Medical Club, of which a hoosier, Dr. J. H. Honan, is president. The physicians' wives are always welcome, and it has proved to be the best way in which the American physicians become acquainted with men and institutions in Berlin.

SOCIETY PROCEEDINGS***Indiana State Medical Association.***

Terre Haute Session.

OFFICIAL MINUTES OF THE HOUSE OF DELEGATES.**First Meeting.**

The house was called to order at 8 p. m. Wednesday, October 6, by the president, Dr. Geo. D. Kahlo, of French Lick.

Secretary F. C. Heath called the roll, and in connection therewith Dr. H. O. Bruggemann, of Fort Wayne, pointed out that it was unconstitutional for the House to allow any member of a county medical society who is not an accredited delegate or alternate, to act in the event of the absence of either delegate or alternate, and said that the constitution should be strictly followed.

After this matter was freely discussed pro and con by several delegates it was moved that the Chair appoint a committee to present a proper amendment to the constitution to care for this subject, said committee to report at the next meeting of the House. Seconded.

After further discussion Dr. W. N. Wishard, of Indianapolis, moved to amend that the committee be instructed to report whether, in its judgment, such an amendment is desired.

The amendment was seconded and accepted.

It was then moved that the whole matter be laid on the table.

Seconded and carried.

Dr. C. H. McCully, of Logansport, moved that it is the sense of the House of Delegates that the constitution be interpreted literally and strictly.

Seconded and carried.

Dr. H. O. Bruggeman, of Fort Wayne, said it occurred to him that the House of Delegates ought to have a committee on credentials, and accordingly moved that a committee of three be appointed for that purpose.

This motion was seconded by several and carried.

The president said there were several important matters to come before the House. These he outlined briefly, and presented the various recommendations of the committees.

The secretary stated that inasmuch as the president had embodied in his remarks all the recommendations that were made in the reports of the various committees, to facilitate business he moved that these recommendations be taken up in the order given, and in order that too much time might not be consumed in the discussion, he further moved that a time limit of fifteen minutes be put on the consideration of every subject.

Seconded and carried.

The president stated that the first business to consider was the report of the Committee on State Medicine, which recommended that a special committee of the association be appointed to consider and report upon the necessity of the medical inspection of school children throughout the state.

Dr. A. E. Bulson, Jr., of Fort Wayne, moved that a committee of five be appointed by the Chair.

Seconded and carried.

Dr. H. A. Tucker, of Greencastle, pointed out that it was vitally important to provide funds for the maintenance of the Tuberculosis Hospital. Accordingly he moved that the Chair appoint a committee of three to confer with the proper authorities to see if said committee could not procure funds for this purpose.

Seconded and carried.

The president stated that the Committee on Medical Education recommends that the association recommend to the State Board of Medical Registration the appointment of a committee to consider the general desirability of increasing the requirements for the licensure examinations.

No action was taken on this subject at this time.

The president referred to the matter of restricting the number of papers to be read before each section, and asked the pleasure of the House regarding this matter.

Dr. R. J. Blount, of Valparaiso, said it occurred to him that from the amount of business brought before the association it would require a three days' session instead of two. He therefore moved that a three days' session be held hereafter. Seconded.

It was moved as a substitute that the number of papers be restricted instead of lengthening the session. Seconded.

Dr. Wishard moved to amend that a three days' session be authorized, and then at the discretion of the president and the program committee and other officers, if the conditions seemed to demand a three days' session, it would be had, but otherwise a two days' session shall be held.

The amendment was seconded and accepted.

Dr. G. F. Keiper, of Lafayette, spoke in favor of a two days' session, stating as a reason that very few of the members would remain over until the third day, and thereupon moved that the substitute, with its amendment, be laid on the table, which was seconded and carried.

Dr. Keiper then spoke in favor of establishing a section devoted to diseases of the eye, ear, nose and throat, and moved that the House authorize the establishment of such a section. Seconded.

Dr. Howitt said there was no more reason for establishing a section devoted to the diseases of the eye, ear, nose and throat than there was for establishing a Section on Anatomy and Physiology, or a Section on Skin Diseases or on Nervous and Mental Diseases, and he thereupon moved that Dr. Keiper's motion be laid upon the table.

Seconded and carried.

Dr. Bulson moved that the program committee accept for the programs of the sessions of the Indiana State Medical Association not more than five papers for each meeting of each section. He stated that if five papers were discussed as they should be at each meeting it was all that could be properly handled in the time given to each meeting. The motion was seconded by several and carried.

Dr. Bulson moved that each paper considered by the program committee shall have been read before and received the endorsement of the county medical society of which the essayist is a member. Seconded and carried.

The president stated that the next question for consideration was the advisability of the association adopting some plan of cooperative medical defense.

Dr. A. M. Hayden, of Evansville, moved that the Chair appoint a committee of three for the purpose of

thoroughly considering and investigating it from a legal standpoint to determine if it is feasible to establish a fund for the purpose of defending malpractice suits, said committee to make its report next year. Seconded and carried.

The president said that the next subject for consideration was with reference to the advisability of restricting the number of delegates of each county medical society to one for every fifty members or major fraction thereof instead of to one hundred as was now provided by the constitution.

Dr. T. B. Eastman, of Indianapolis, moved that the words, "fifty or major fraction thereof" be substituted for the words "one hundred or major fraction thereof" in Section II, Chapter 4, of the by-laws. Seconded.

The secretary moved to amend that the words "one hundred" in Section XI, Chapter 9, be also changed to "fifty or major fraction thereof."

The amendment was seconded, accepted, and the original motion as amended was put and carried, but is to be finally voted on at the next meeting of the House.

Dr. C. E. Harris, of Bloomington, was granted permission to return to the recommendation of the Committee on Medical Education, and moved that the Chair appoint a committee of three to confer with the State Board of Medical Registration and Examination with reference to the advisability of raising the examination requirements for license in this state. Seconded.

Dr. Keiper said that this matter would have to be settled by the State Medical Examining and Licensing Boards of this country, and if the House attempts to recommend changes our state board could not take any cognizance of them without consultation with the members of other boards in the country.

After further discussion the motion was put and carried.

The secretary brought before the House the matter of colored physicians becoming affiliated with the association, in order to receive recognition from the American Medical Association, etc., and moved that the request of the Colored Physicians' Organization of the State of Indiana for affiliation with our association be referred to the Council for investigation. Seconded.

Drs. Bruggeman and Eastman spoke in opposition to this, saying that the proper course for the colored physicians to pursue was to come in through their respective county medical societies.

It was then moved that the motion be laid on the table, which was seconded and carried.

The president then announced the following committees that had been authorized at this meeting of the House:

Committee on Medical Inspection of School Children, Drs. J. N. Hurty, W. W. Tucker, Dowden, Walter J. Leach and E. G. Reynard.

Committee on Medical Defense, Drs. H. C. Sharp Thos. B. Eastman and A. E. Sterne.

Committee on Credentials, Dr. H. O. Bruggeman, W. H. Stemm and A. C. Kimberline.

Committee to Confer with State Board of Registration and Examination, Drs. E. D. Clark, Indianapolis, C. E. Harris, Bloomington, and A. M. Hayden, Evansville.

Dr. Bulson pointed out that it was very essential for the House to have a standing committee on credentials, and spoke of the method adopted by the American Medical Association in seating delegates in that body.

Accordingly, he moved that a standing committee on credentials be appointed by the Chair from among the delegates whose term of office will include next year for the next annual session, and that hereafter delegates be supplied with written credentials from their county societies and that only those delegates with written credentials be accepted by the committee.

This motion was seconded by several delegates and carried.

The secretary moved to amend Section 1, Chapter 4, of the by-laws to read as follows: "The House of Delegates shall meet at 8 p. m. on the day before that fixed as the first day of the annual session."

Seconded and carried.

On motion, the House then adjourned until 2 p. m. Thursday.

Second Meeting.

The House of Delegates met at 2:10 p. m., Oct. 7, 1909, and was called to order by the president.

On motion, the reading of the minutes of the previous meeting was dispensed with.

Dr. Chas. H. McCully, of Logansport, moved the acceptance of the amendment to the by-laws fixing the date of the first meeting of the House of Delegates the evening before the regular scientific session.

Seconded and carried.

Dr. Leavitt, of Terre Haute, moved the adoption of the amendment to Section II, Chapter 4, of the by-laws relating to apportionment of delegates. Seconded and carried.

Dr. H. O. Bruggeman, of Fort Wayne, moved that Section XI, Chapter 9, of the by-laws be amended to read as follows: "No one shall be entitled to a seat in the House of Delegates unless his credentials as a delegate shall have been presented to the Committee on Credentials at least ten days before the first meeting of the House of Delegates, provided, however, that the credentials of the alternate may be accepted on the first day of the meeting of the House of Delegates if said credentials are signed and attested to by the president and secretary of the county society.

Seconded and carried.

On motion, the House then adjourned until 8:30 a. m. Friday.

Third Meeting.

The House of Delegates met at 8:45 a. m., Oct. 8, 1909, and was called to order by the president.

Dr. W. N. Wishard, of Indianapolis, moved that an historical committee be appointed by the president and that Dr. G. W. H. Kemper be made chairman of it.

Seconded and carried.

Dr. David W. Stevenson, of Richmond, presented the following preambles and resolutions:

WHEREAS, The Indiana State Medical Association recognizes the great work that is being done in protecting the health of the people and preventing the fraudulent sale of foods and drugs by the enforcement of the Food and Drugs Law; and

WHEREAS, It is apparent that certain manufacturing interests are endeavoring to nullify such legislation, and to harass and hinder the officials in the enforcement of the law; therefore, be it

Resolved, That the Indiana State Medical Association expresses its confidence in the Indiana State Board of Health to resist any effort made by manufacturers or others, which may in any way weaken the efficiency of the Pure Food and Drugs law, or restrict the scope of its operation.

Resolved, That the Indiana State Medical Association does not accept the decision of the Referee Board appointed by Ex-President Roosevelt as final, and that we recommend to the President of the United States and the Secretary of Agriculture that further investigations conducted upon

the broadest lines be continued, that the people and the food producer may know the value, the necessity or harmfulness of any or all food preservatives; and, be it further

Resolved, That the Indiana State Medical Association recognizes and emphatically endorses the work of their fellow-citizen, Dr. Harvey W. Wiley, in his untiring efforts extending over many years to obtain for the people pure foods and pure food legislation, and that we express our appreciation of his work by sending him a copy of these resolutions.

On motion of Dr. W. N. Wishard, of Indianapolis, seconded by several members, the resolutions were adopted.

The secretary read the amendment to Section XI, Chapter 9, of the by-laws, offered by Dr. Bruggeman, and on motion is was adopted.

Dr. H. O. Bruggeman, of Fort Wayne, presented the following amendment to the constitution:

"An amendment to Section III, Article IX, of the constitution: To insert in line 1 of said section, following the word 'association,' the words 'except the councilors,' and inserting in line 3, following the word 'delegate,' the words, 'nor councilor,' and appending to the end of the Section III the words: 'The councilors shall be elected by the respective district societies, provided that if any district should exist without a society the councilor for such a district shall be elected by the House of Delegates.'"

Section III, as amended in this manner, will read as follows: "The officers of this association, except the councilors, shall be elected by the House of Delegates on the morning of the last day of the annual session, but no delegate nor councilor shall be eligible to any office named in the preceding section, except that of councilor, and no person shall be elected to any such office who is not in attendance upon the annual session, and who has not been a member of the Association for the past two years. The councilors shall be elected by the respective district societies, provided that if any district should exist without a society the councilor for such a district shall be elected by the House of Delegates." (To lie over until the next annual session.)

The secretary called the roll, after which the election of officers was proceeded with, and the following were duly elected:

President, Dr. T. C. Kennedy, Shelbyville; first vice-president, Dr. E. M. Van Buskirk, Ft. Wayne; second vice-president, Dr. Eugene Hawkins, Greencastle; third vice-president, Dr. Theodore Potter, Indianapolis; secretary, Dr. F. C. Heath, Indianapolis; treasurer, Dr. David W. Stevenson, Richmond.

The president announced the following committees:

COMMITTEE TO COOPERATE WITH AUTHORITIES TO RAISE FUNDS TO MAINTAIN TUBERCULOSIS HOSPITAL.

Dr. W. N. Wishard, Indianapolis.
Dr. A. C. Kimberlin, Indianapolis.
Dr. C. H. McCully, Logansport.

COMMITTEE ON CREDENTIALS

Dr. C. P. Cook.
Dr. G. D. Miller, Logansport.
Dr. W. H. Stemm, North Vernon, Ind.

DELEGATES TO AMERICAN MEDICAL ASSOCIATION

Dr. A. C. Kimberlin, Indianapolis.
Dr. C. H. McCully, Logansport.

ALTERNATES.

Dr. Fred A. Tucker, Noblesville.
Dr. J. Rilus Eastman, Indianapolis.

COUNCILORS.

Fifth District, Dr. Jos. II. Weinstein, Terre Haute.
Second District, Dr. August Knoefel, Linton.
Eighth District, Dr. G. W. H. Kemper, Muncie.
Eleventh District, Dr. Chas. H. McCully, Logansport.

Place of meeting, Ft. Wayne.

Dr. H. O. Bruggeman, of Ft. Wayne, moved that the thanks of the House be extended to the program committee for the excellent program provided for this session; also that thanks be extended to Dr. Kimberlin for bringing patients to the Association session and exhibiting them. Further, that the thanks of the House be extended to the Committee of Arrangements, the mayor of the city, members of the County Medical Society and to all good citizens who have contributed so much to the hospitality of the members. This motion was seconded by several and carried.

Dr. A. E. Bulson, Jr., of Ft. Wayne, moved that the president appoint three delegates to attend the next convention for the revision of the Pharmacopeia, to be held in Washington in May, 1910. Seconded and carried.

On motion of Dr. Bulson a vote of thanks was extended to the president, secretary and other officers of the Association who have conducted the affairs of the Association so successfully throughout the session just closed.

There being no further business to come before the meeting the House of Delegates than adjourned *sine die*.

THE COUNCIL.

The Council of the Indiana State Medical Association held three meetings during the Terre Haute session. General medical affairs in the various districts came up for discussion. Conditions were reported about as they were at the last annual session, the gains in membership in the various county societies being partially offset by losses. The association shows an increase of membership over last year, and it was thought that more activity on the part of county society officers will result in still further gains for the coming year.

The editor of THE JOURNAL made an informal report in which he stated that THE JOURNAL was larger and mechanically better than last year, and while being published at an increased cost, the income would be sufficient to pay all expenses. He thought that with the close of the year the financial report would be similar to the one published last year in which all expenses had been met from the income of THE JOURNAL, and a small balance would be left over as an honorarium for the editors.

As a matter of economy for the association it was decided that all printing shall be in charge of THE JOURNAL, and that uniform stationery for all officers be made from one plate.

On motion, duly carried, the Council recommended that the House of Delegates appoint an official historian, and that Dr. G. W. H. Kemper be given the position.

On motion, duly carried, the editor of THE JOURNAL was ordered to continue the policy of accepting nothing but the highest grade of ethical advertising for THE JOURNAL, and was authorized to use his individual judgment as to what advertising shall be considered appropriate for acceptance under this rule.

The chairman appointed as an auditing committee Drs. G. W. H. Kemper, W. H. Stemm and J. H. Weinstein, who reported that the treasurer's account, with vouchers attached, was found correct. They also audited and approved for payment the bills covering current expenses for the year, including those of the secretary and the various councilors.

The election of officers for the Council for the ensuing year resulted as follows: President, W. N. Wishard; secretary, Albert E. Bulson, Jr.

On motion it was decided to hold the next meeting of the Council at Indianapolis on the second Thursday in January, 1910.

REGISTRATION AT TERRE HAUTE SESSION.

This list has been furnished by the Committee on Arrangements. Some errors may be found, due to inability of the committee to decipher the handwriting of some of those who registered.

M. A. Boor, Terre Haute.	Earl R. Gibbs, Greenfield.	W. F. Howatt, Hammond.
Chas. M. DuPuy, Riley.	S. M. Rice, Terre Haute.	A. C. Kimberlin, Indianapolis.
C. C. Givens, Lewis, Ind.	Geo. R. Tubbs, West Point.	T. Victor Keene, Indianapolis.
James W. Brunker, Riley.	J. E. Cullipher, New Moysville.	Charles Wyeth, Terre Haute.
Chas. N. Combs, Terre Haute.	C. N. Trouble, Roachdale.	R. E. Jones, Clayton.
E. M. Van Buskirk, Ft. Wayne.	C. C. Collins, Roachdale.	T. A. Hays, Burns City.
J. C. Wallace, Ft. Wayne.	E. Conover, Evansville.	J. S. Gilkison, Indian Springs.
H. O. Bruggeman, Ft. Wayne.	C. R. LaBier, Terre Haute.	Perry Woolery, Heltonville.
J. R. Love, Terre Haute.	F. E. Weideman, Terre Haute.	T. M. Weaver, Staunton.
A. W. Tobias, Elwood.	L. O. Carson, New Augusta.	T. F. Brown, Sandford.
Walker Schell, Terre Haute.	W. B. McDonald, New Augusta.	Bo Bowell, Laporte.
J. Rudolph Yung, Terre Haute.	Ralph A. Chappell, Indianapolis.	O. M. Keyes, Dana.
Jos. Weinstein, Terre Haute.	C. F. Neu, Indianapolis.	G. E. Paff, Rome City.
O. R. Spigler, Terre Haute.	David Ross, Indianapolis.	E. B. McAllister, Terre Haute.
E. T. Zaring, Westphalia.	F. C. Walker, Indianapolis.	A. Williams, Marshall.
W. E. Hosman, Akron.	W. J. Sandy, Martinsville.	B. W. Egan, Flora.
Millard Knowlton, Terre Haute.	W. B. Richmond, Terre Haute.	A. A. Washburn, Clinton.
R. D. Blount, Valparaiso.	A. M. Hayden, Evansville.	James W. Hadley, Frankfort.
R. H. Van Cleave, Farmersburg.	J. C. Trueblood, Loogootee.	John E. Robison, Frankfort.
L. J. Willien, Terre Haute.	M. A. Johnston, Oaktown.	Geo. W. Brown, Frankfort.
Ernest L. Mattox, West Terre Haute.	O. T. Crafton, Terre Haute.	I. J. Vaughan, Topeka.
B. M. Hutchings, Terre Haute.	W. H. Stemm, North Vernon.	J. T. Oliphant, Farmersburg.
R. J. Wilam, Salem.	L. B. Hill, Seymour.	B. O. White, Sedalia.
T. F. Spink, Washington.	E. D. Freeman, Osgood.	W. O. Hidlebrand, Topeka.
M. R. Combs, Terre Haute.	R. E. Holder, Columbus.	E. F. Small, Decker.
L. P. Luckett, Terre Haute.	H. C. Sharp, Indianapolis.	Chas. E. Stone, Shoals.
O. E. Fink, Terre Haute.	Geo. D. Kahlo, French Lick.	D. E. Johnston, Moores Hill.
Garrett Van Sweringen, Ft. Wayne.	B. Van Sweringen, Ft. Wayne.	W. R. Moffitt, Lafayette.
E. T. Spotswood, Terre Haute.	Albert E. Bulson, Jr., Ft. Wayne.	C. T. Wolfe, Corydon.
B. W. Rhamy, Ft. Wayne.	W. O. Jenkins, Terre Haute.	S. C. Darragh, Cayuga.
Alfred Kane, Ft. Wayne.	H. M. Hall, Camden.	P. B. Carter, Peru.
James Ubless, Merom.	G. W. Thompson, Winamac.	I. M. Trent, Munieie.
Paul F. Martin, Indianapolis.	Chas. M. Kennedy, Camden.	W. T. S. Dodds, Indianapolis.
J. L. Gillespie, Greencastle.	David A. McCleary, Deer Creek.	Paul E. Morgan, Indianapolis.
H. H. Martin, La Porte.	J. P. Galbreth, Burnetts Creek.	J. Nichols, Atherton.
E. T. Sherwood, Linton.	J. M. King, Greencastle.	G. G. Allred, Danville.
Earl Miller, Indianapolis.	E. D. Miller, Logansport.	R. H. Ritter, Indianapolis.
W. Q. Hoag, Indianapolis.	C. C. Campbell, Walton.	August Knoefel, Linton.
F. G. Thornton, Knightsville.	Ben LaBree, Jr., Cincinnati, Ohio.	E. R. Mason, Bloomfield.
	F. A. Tucker, Noblesville.	Jared Spooner, Peru.
		James A. Maple, Shelburne.
		J. E. King, Richmond.
		Bayard G. Keeney, Shelbyville.
		Frederick Ruby, Union City.
		Thos. B. Eastman, Indianapolis.
		C. L. Botkin, Farmland.
		Chas. S. Bryan, Vincennes.
		W. P. Boal, Sandborn.
		David W. Stevenson, Richmond.
		G. W. H. Kemper, Munieie.
		C. S. White, Rosedale.
		Chas. C. Cook, New Albany.
		T. C. Kennedy, Shelbyville.

W. N. Wishard, Indianapolis.	G. Reynort, Union City.
W. J. Leach, New Albany.	T. Roy Cook, Bowling Green.
O. E. Maddox, Rockville.	W. C. McFadden, Shelbyville.
Geo. Rowland, Covington.	J. Cable, Spencerville.
W. H. Dinsmore, Kramer.	Charles H. McCully, Logansport.
	F. C. Heath, Indianapolis.
	C. H. English, Ft. Wayne.
	C. W. Dowden, West Baden.
	G. G. Brudi, New Haven.
	L. T. Rawles, Huntertown.
	Chas. Sudranski, Green castle.
	P. H. Swain, Ridge Farm, Illinois.
	J. L. Fortune, Terre Haute.
	O. H. Rea, Culver.
	J. N. Hurty, Indianapolis.
	Samuel Kennedy, Shelbyville.
	J. W. Anderson, Odon.
	O. W. McQuown, Marion.
	James A. Mattison, Marion.
	A. W. Lloyd, Marion.
	Ott Casey, Terre Haute.
	W. R. Mattox, Terre Haute.
	E. W. Layman, Terre Haute.
	F. H. Jett, Terre Haute.
	J. H. McElroy, Aurora.
	G. H. Smith, Knights town.
	R. H. Leavitt, Terre Haute.
	F. W. Crapo, Terre Haute.
	H. J. Pierce, Cloverland.
	O. O. Alefondree, Terre Haute.
	F. C. Robinson, Martinsville.
	K. K. Wheeloek, Ft. Wayne.
	J. P. Worrell, Terre Haute.
	C. E. Harris, Bloomington.
	H. R. Alburger, Bloomington.
	Homer Woolery, Bloomington.
	L. Z. Bracks, Terre Haute.
	T. C. Stunkard, Terre Haute.
	W. E. Bell, Terre Haute.
	E. D. Thixtun, Terre Haute.
	E. C. McBride, Terre Haute.
	James McCall, Terre Haute.
	T. C. Louks, Sheleville.
	J. S. Hunt, West Terre Haute.

- R. R. Belt, West Terre Haute.
 M. B. V. Neewcomer, Tip-ton.
 J. A. Cooper, Terre Haute.
 Stephen Young, Terre Haute.
 M. H. Kutch, Terre Haute.
 E. W. Bennett, Terre Haute.
 Frank A. Tabor, Terre Haute.
 L. C. Miller, Twelve Mile.
 Vernon A. Shanklin, West Terre Haute.
 H. L. Bernheimer, Terre Haute.
 G. W. Daniels, Marion.
 G. D. Marshall, Kokomo.
 G. E. Eckart, Marion.
 G. E. Daniels, Marion.
 D. B. Miller, Terre Haute.
 H. M. Mullikin, Terre Haute.
 J. M. Baughman, Evansville.
 W. J. Martin, Kokomo.
 Jos. Frisz, Terre Haute.
 J. H. Cook, Terre Haute.
 W. J. Moenkhaus, Bloomington.
 J. Kunkler, Terre Haute.
 W. G. Crawford, Terre Haute.
 W. L. Mapes, West Terre Haute.
 A. H. Caffee, Terre Haute.
 B. V. Caffee, Terre Haute.
 E. S. Niblack, Terre Haute.
 Jas. E. Elliott, Terre Haute.
 Chas. S. Bond, Richmond.
 Geo. W. Finley, Brazil.
 Geo. T. McCoy, Columbus.
 Wm. L. Grossman, North Vernon.
 M. O. Cincter, Anderson.
 D. S. Quicke, Anderson.
 J. C. Bohn, Terre Haute.
 C. K. Bruner, Greenfield.
 A. N. Lakin, State Line.
 Eugene Bowers, Vincennes.
 I. M. Casebeer, Newport.
 L. B. Shanklin, Sullivan.
 C. C. Basset, Goodland.
 T. E. Collier, Brook.
 E. G. Blinks, Michigan City.
 F. V. Martin, Michigan City.
 Jno. M. Harrah, Switz City.
 Daniel T. Miller, Terre Haute.
 R. J. Danner, Elnora.
 H. D. McCormick, Vincennes.
 S. A. Prather, Vincennes.
 R. T. Thralls, Hymers.
 B. A. Rose, Linton.
 S. B. Elrod, Henryville.
 L. A. Hyde, Linton.
 J. P. Ward, Vevay.
 Simon J. Young, Valparaiso.
- Miles F. Porter, Fort Wayne.
 A. W. Gifford, Tipton.
 D. A. Bethea, Terre Haute.
 B. Yocom, Coal City.
 Geo. T. Keiper, Lafayette.
 W. L. Jenning, Bridgeport.
 S. Hunt, Coatesville.
 Frank B. Wynn, Indianapolis.
 O. James, Cory.
 L. B. Staley, Bicknell.
 B. F. Chambers, Lyons.
 F. A. Vausandt, Bloomfield.
 W. E. Amy, Bicknell.
 A. B. Knapp, Washington.
 Maude Arthur, Washington.
 Vance Moy, Washington.
 W. O. McKittrick, Plainville.
 Wesley M. Hall, East Enterprise.
 J. R. Bloomer, Terre Haute.
 Chas. E. Caylor, Reenville.
 J. N. McCoy, Vincennes.
 W. H. Beaty, Worthington.
 A. L. Wilson, Indianapolis.
 R. M. Reagan, Mouon.
 W. D. Schwartz, Portland.
 J. C. Blossom, Richmond.
 W. H. Butler, Columbus.
 J. M. Benham, Indianapolis.
 F. F. Hutchins, Indianapolis.
 J. M. Cunningham, Indianapolis.
 J. E. Hiatt, New Castle.
 T. J. Beasley, Danville.
 J. R. Simonds, Indianapolis.
 J. R. Ranes, Union.
 H. L. Muncie, Brazil.
 R. E. Repass, Greenwood.
 H. A. Moore, Indianapolis.
 E. R. Sisson, Greenfield.
 J. W. Gregor, Greenfield.
 A. B. Lockridge, Rockville.
 J. J. Parker, Merom.
 H. P. Tucker, Seymour.
 T. A. Burkhardt, Jasonville.
 W. H. Richardson, Vernon.
 A. T. Custer, Linton.
 G. H. Pratt, Terre Haute.
 W. M. McGaughey, Green castle.
 G. N. Prun, Carlisle.
 W. D. Asbury, Coalmont.
 B. W. Wiseman, Culver.
 A. R. Burton, Princeton.
 J. F. Somes, Vincennes.
 B. Ratliff, West Newton.
 Clarke E. Stewart, Vincennes.
 A. L. Ziliak, Princeton.
- R. S. Anderson, Princeton.
 H. H. Maxam, Prineeton.
 J. S. Ramsey, Vincennes.
 P. H. Canly, Vincennes.
 W. F. Butler, Stoekwell.
 J. C. Hoover, Boonville.
 C. H. Edwards, Terre Haute.
 J. T. McFarlin, Williams.
 H. R. Allen, Indianapolis.
 C. J. Finney, Attica.
 C. G. Beckett, Attica.
 Geo. W. Wallage, Middle town.
 T. J. Griffith, Crawfordsville, Ind.
 A. W. Myers, Monroe City.
 J. Freeman, Sullivan.
 Martha H. Griffith, Crawfordsville.
 Harlan E. Mize, Kramer.
 W. R. Hutcheson, Green castle.
 W. W. Tucker, Green castle.
 J. F. Smith, Brazil.
 E. Hawkins, Greencastle.
 J. S. Ragan, Plainsfield.
 O. M. Smick, Terre Haute.
 J. P. Salb, Jasper.
 J. A. Salb, Indianapolis.
 O. C. Neier, Indianapolis.
 L. W. Kuebler, Terre Haute.
 L. A. Salb, Terre Haute.
 A. C. Pebworth, Indianapolis.
 Stanley Coulter, Lafayette.
 B. Myers, Bloomington.
 E. D. Clark, Indianapolis.
 J. A. Pfaff, Indianapolis.
 J. H. Oliver, Indianapolis.
 C. H. Fullinweder, Mt. Vernon.
 H. R. Vandivier, Clay City.
 Wilson T. Lawson, Danville.
 O. G. Pfaff, Indianapolis.
 H. H. Thompson, Noblesville.
 L. F. Schmauss, Alexandria.
 H. B. Pantzer, Indianapolis.
 D. C. Shaff, Clinton.
 Thomas C. Hood, Indianapolis.
 J. H. Ford, Indianapolis.
 J. H. Ward, Indianapolis.
 W. F. Hughes, Indianapolis.
 T. Z. Ball, Waveland.
 M. N. Hadley, Indianapolis.
 J. H. Work, Shelburn.
 A. L. Woods, Terre Haute.
 J. D. Garrett, Indianapolis.
 L. L. Williams, Brazil.
 D. R. Ulmer, Terre Haute.
 F. C. Dilley, Brazil.
 A. W. Brayton, Indianapolis.
 Theo. Potter, Indianapolis.
- A. B. Graham, Indianapolis.
 H. A. Belt, Lebanon.
 A. P. Fetch, Lebanon.
 B. S. Hunt, Winchester.
 Lloyd Stevenson, Winchester.
 Urbana Spink, Indianapolis.
 Chas. A. White, Danville.
 Guy Conover, Terre Haute.
 Geo. J. Cook, Indianapolis.
 H. S. Thurston, Indianapolis.
 E. Ray Royer, North Salem.
 Jewett V. Reed, Indianapolis.
 W. E. Thomas, Clarksburg.
 E. J. Schott, Terre Haute.
 H. B. Leavitt, Worthington.
 J. W. Clifford, Worthington.
 W. F. Willien, Terre Haute.
 Joseph Rilus Eastman, Indianapolis.
 Harry Elliott, Brazil.
 H. J. Fernald, Frankfort.
 R. C. Pearce, Bellmore.
 Thos. B. Noble, Indianapolis.
 Wm. I. Scott, Kokomo.
 C. C. Cottingham, Indianapolis.
 D. M. Reynolds, Clayton.
 E. O. Little, Hume, Ill.
 Farwell, Ft. Wayne.
 K. C. Hershey, Carmel.
 C. F. Briggs, Sullivan.
 E. W. Wood, Columbus.
 C. Patton, Terre Haute.
 G. E. Willoughby, Goshport.
 A. L. Cabell, Terre Haute.
 Jos. L. Preston, Cloverdale.
 R. Gantz, Saline City.
 Frank Kennedy, Goodland.
 L. D. Brose, Evansville.
 E. M. Deputy, Dugger.
 C. M. Lowder, Dugger.
 W. S. Grayston, Huntington.
 Albert M. Cole, Indianapolis.
 M. B. Van Cleave, Terre Haute.
 J. C. Sexton, Rushville.
 G. F. Beasley, Lafayette.
 S. U. Thralls, Hymera.
 T. A. Bryan, Mattoon, Ill.
 M. H. Waters, Terre Haute.
 C. S. Laughlin.
 W. D. Hoskins, Indianapolis.
 Bernard A. King, Cicero.
 Madge Patton Hawkins, Terre Haute.
 Edwin Walker, Evansville.
 E. E. Robards, Shelburn.
 W. D. Gerrish, Clinton.

A. Martin, Bellmore.
 W. W. Moore, Terre Haute.
 C. E. Sims, Kurtz.
 Paul H. Keyes, Dana.
 H. E. Bland, Fairbanks.
 John Laughlin, Rantoul, Illinois.
 S. G. Holingsworth, Brazil.
 Albert G. Gunn, Paris, Ill.
 E. O. Laughlin, Paris, Ill.
 G. W. Fuller, Paris, Ill.
 T. C. McCord, Paris, Ill.
 W. N. Thompson, Sullivan.
 E. A. Evans, Rosedale.

J. R. Wilson, Prairie Creek.
 J. Y. McCullough, Casey, Ill.
 R. H. Leavitt, Terre Haute.
 G. W. Crapo, Terre Haute.
 O. O. Alexander, Terre Haute.
 J. P. Worrell, Terre Haute.
 H. J. Pierce, Cleveland.
 F. C. Robinson, Martinsville.
 C. E. Harris, Bloomington.

Dr. Chas. G. Beall reported two cases illustrating effect when lesion occurs in the upper neurones and in the lower.

CASE 1.—Boy, 7 years of age. Poliomyelitis, anterior, in the beginning of the lower motor neurons.

CASE 2.—Lesion in upper motor neuron, probably transverse myelitis. Lesion thought to be of influenzal origin.

Dr. J. C. Wallace reported a case of acute articular rheumatism markedly relieved by oil of wintergreen applied externally. Patient, man, aged 25. Had been troubled at intervals for a month with rheumatism of various joints. June 26, patient in bed in extreme pain. Left knee joint painful, with nodule to outer side of knee. Pulse 100, temperature 102; knee swollen and red. Ordered calomel, gr. $\frac{1}{4}$ every fifteen minutes for four doses, followed by epsom salts. Gave morphia, gr. $\frac{1}{4}$ by mouth, for pain. Oil of wintergreen locally. Gave prescription for sodium salicylate 10 gr., phenacetin 5 gr. and caffeine 2 gr., every three hours if awake. Following afternoon patient was on his feet, pain all gone, and temperature and pulse normal.

CASE 2.—Albuminuria caused by inhalation of sawdust. Patient a woodworker. Examination of urine showed marked reaction for albumin. Patient had been working in washing machine factory for six months. Remedy, change of occupation.

CASE 3.—Sinus under right eye. Patient, woman, consulted physician about lump under eye, and was advised to wait for it to come to a head, when he would open it. On examination found sinus opening into mouth and discharging pus both ways. Further questioning elicited the fact that patient had tooth extracted some time previously and alveolar process fractured, so it was quite probable that a piece of dead bone was responsible for sinus. Operation for removal of dead bone refused. Patient seen again six months later. She stated that after applying some German salve the external wound closed, but discharged into mouth for about a month, when it healed. Spicula of bone no doubt came out, and after the irritation ceased the sinus healed. She now has a marked depression. Case teaches that a more thorough early examination and proper treatment would have saved an immense amount of unnecessary pain and subsequent deformity.

Discussion by Drs Weaver and Rawles.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Sept. 14, 1909.)

Society met in regular session in the assembly room, with twenty-six members present. Minutes of previous meeting read and approved.

Dr. B. Van Sweringen reported a case of extrauterine pregnancy, accompanied by violent pain in epigastrium, and vomiting and faintness. Pulse 110, but under a dose of $\frac{1}{4}$ grain of morphia came down to 84. Operated the day after entering hospital (laparotomy). On operation found pregnancy existing in left tube. Tube was ruptured and the belly full of blood. Probable that the effect of the morphia was largely responsible for the reduction in the pulse rate. Discussion by Dr. Morgan.

Cystitis, Etiology and Prophylaxis, was the title of a paper by Dr. J. E. McArdle. The essayist classified the causes as predisposing and exciting. Congestion and retention of urine are the most frequent predisposing causes. Retention is often induced by vesical stone, vesical tumor and prostatic hypertrophy. Trauma, abnormal conditions of urine, prolonged

Dr. Dancer also discussed this subject.

Ruptured Aneurysm of the Arch and Descending Aorta.—Case report and specimen exhibited by Dr. Allen Hamilton. Case, man, aged 45, mechanic; family history negative. At age of 16 had muscular rheumatism. At 18 had pain in left side from time to time. Six years ago was struck in back by derrick. Last illness dates three years back. Had continuous pain under left scapula. Died very suddenly. Autopsy disclosed ruptured aneurysm of arch and descending aorta. Case interesting (1) because of unusual position for aneurysm and (2) no lues had been present; probably due to hard labor. Diagnosis lay between benign neoplasm and aneurysm. Before death there was fluid in chest. Following puncture serum was found to be clear and of high specific gravity.

Discussion by Dr. B. Van Sweringen.

sexual excitement and lesions of the central nervous system, by destroying vasomotor control, all favor retention and development of cystitis. The colon bacilli, staphylococci, streptococci and gonococci are the most common varieties of bacteria which attack the walls of the bladder. The most common mode of entrance of these bacteria is by the urinary catheter, especially when employed during puerperal period or after surgical operations.

With reference to cystitis in infancy the author said that this condition, in 75 per cent. of all cases, is caused by the colon bacillus.

Regarding prophylaxis, Dr. McArdle said that when a physician finds it will be necessary to catheterize a patient frequently, one of the best prophylactic agents is urotropin, combined with equal parts of benzoate of soda. Local congestion of bladder is to be avoided by attention to rules of hygiene, regular evacuation of the bowels being a matter of cardinal importance.

Discussion by Drs. Kruse, C. E. Barnett, McOscar, G. Van Sweringen, B. Van Sweringen and Dr. Drayer.

Dr. B. W. Rhamy reported a case of melamnia. Discussion by Dr. Drayer.

Adjourned.

J. C. WALLACE, Sec.

CLAY COUNTY.

The first session after the summer vacation was held in Brazil, September 16. The minutes of the last two meetings were read and approved.

Applications for membership of Dr. Harry Elliott, of Brazil, and Dr. James Huffman, of Poland, were received.

On motion a committee on revision of the county fee bill was appointed, the following doctors being selected: Drs. Hollingsworth, Vandiver, Smith, Pierce and Young.

Therapy of the Normal Saline Solutions was the title of a paper by Dr. Harry Elliott. General discussion. Adjourned.

G. W. FINLEY, Sec.

ELKHART COUNTY.

The society met in regular session in Goshen September 2, with eighteen members present. Dr. G. A. Whippen, of Goshen, was elected to membership and the application of Dr. Christophel, of New York, was referred to the Board of Censors.

Facial Hemiatrophy. Case report and patient exhibited by Dr. A. C. Yoder, of Goshen.

Patient, girl, aged 10. Weighed 11 pounds when born. Delivery instrumental. No injury to the head or face by forceps noticed. Weaned at 9 months. Was a fretful, crying baby until a year and a half old. She had two falls, one when a year and a half old and the other when three years old. No bruises or swellings either time. No history of any ulcerative or fistulous process ever having been present in left side of face.

At the age of 3½ parents noticed for the first time that left side of face was a little smaller than the right, a little paler and somewhat spotted. The difference has remained ever since. No loss of motion has been noticed in the muscles of her face nor in any part of her body. No pain in left side of face. At no time has there been any twitching of the muscles of left half of face.

The most marked feature noticed in the case now is the difference in size of the two halves of her face, the left side being much smaller; the skin thinner, the subcutaneous fat diminished, the muscles atrophied and the bones wasted, more particularly the malar. Left eye normal, except that lower part of orbit is somewhat sunken. Patient can articulate plainly, chew her food on the left side, and can smile and frown. Tongue protrudes in middle line and one half is no smaller than the other. The size of one half of the rest of her head is the same as the other, and the muscles in the left side of her neck are developed the same as the right. Diagnosis facial hemiatrophy.

The atrophy following anterior poliomyelitis and hemiplegia must be differentiated. But muscles that atrophy because of these two conditions always have a preceding stage of paralysis. There never has been a history of paralysis in this case.

Lesions of cerebral axis must also be excluded. In this type of lesions belong those of bulbar paralysis which "is a slowly advancing degeneration in the nuclei of origin of the motor cranial nerves." (Starr, Nervous Diseases, p. 613.) In this condition patient first shows difficulty in articulation, later in chewing and masticating. Patient has never had any difficulty in these functions. Other lesions of cerebral axis would be indicated by oculomotor palsy if lesion were located in the crus cerebri; by paralysis of the fifth, sixth, seventh and eighth nerves if the lesion were located in the pons; and by paralysis of the ninth, tenth, eleventh and twelfth nerves if the lesion were located in the medulla. (Ibid, p. 466.)

Scleroderma must be excluded, especially the localized form, as it affects the skin and not subdermal structures. The skin is whitened and becomes inelastic and tough to the touch. Such description does not fit this case.

Osler says that acquired facial hemihypertrophy, making the normal half seem atrophied, will have to be excluded. In this case it is quickly seen that the left side is smaller than normal.

Facial hemiatrophy "develops in youth; it has not been observed before the age of ten years" (Starr, Nervous Diseases, p. 651). If correct anamnesis has been made this case was first noticed at the age of 3½ or 4. From Osler we learn that "the atrophy starts in childhood." (Practice of Medicine, 7th edition, p. 1104.)

Authorities do not agree on the pathology of this condition. Some say the pathology is not known; others believe it to be a cervical sympathetic paralysis; while others believe it to be an interstitial neuritis of the fifth nerve, the superior maxillary branch being most affected. "There is no known treatment." (Starr, loc. cit. p. 651.) "It is incurable." (Osler, loc. cit., p. 1105.)

In this case the facial muscles of the affected side respond to the faradic and interrupted galvanic currents. The muscles are treated for five minutes twice a week, more often using the interrupted galvanic current from 3 to 5 milliamperes. Sometimes the primary faradic current of slow vibrations is used instead.

Dr. I. J. Becknell reviewed the pathology and treatment of Bright's disease, and Dr. H. A. Barbour, of Bristol, read a paper on "Some Suggestions in the Care of Sick Children." General discussion.

Adjourned. J. A. WORK, JR., Sec. Pro. Tem.

KOSCIUSKO COUNTY.

The regular meeting of the Kosciusko County Medical Society was held September 28. The first paper of the session was by Dr. C. C. DuBois, of Warsaw, entitled, "The Etiology, Diagnosis and Treatment of Acute Chorea." Special mention was made of the modern tendency to regard chorea as an infectious disease, closely related to rheumatism. With reference to treatment the author said that, according to Koplik, arsenic will cause albuminuria before puffiness of the eyelids, and that in all cases of its administration the urine should be watched and the drug stopped upon the appearance of a trace of albumin. Dr. C. E. Thomas, of Leesburg, reported two cases, each of which had a history of chorea in the family, and each began after sudden fright. Dr. Thomas has given as high as fifteen drops of Fowler's Solution three times a day to a child four years old without bad effects. Dr. C. R. Long, Pierceton, administers Fowler's Solution one drop after each meal, increasing one drop after meals each day, and continues until the child vomits, when the drug is stopped. After a few days he begins as before. Two or three rounds usually cure. Drs. Ford and Nehrbas each reported a case of chorea following acute rheumatism, and Dr. Nehrbas a case of hysterical or rhythmical chorea of unusual interest. The subject was also discussed by Drs. McDonald, of Warsaw, and Yocom, of Mentone.

The Diagnosis and Treatment of Melancholia was the title of a paper by Dr. T. J. Shackleford, of Warsaw, in which the melancholic state was described very graphically and at some length. As treatment, the author thought best to remove these patients from home surroundings, but considered their commitment to public institutions too great a stigma. He therefore advocated their removal to private sanitaria. Dr. McDonald said that he had found private sanitaria too expensive for the average patient, and that treatment among sympathetic, well-meaning friends and relatives at home was impossible. Consequently, he thought the only way to deal with them was to commit them to public asylums. Dr. F. J. Young, of Milford, stated that while opium, as a rule, should not be used, yet if it became necessary the best preparation was the watery extract used hypodermatically, as it was least liable to induce the opium habit.

Adjour ned.

C. C. DUBOIS, See. pro tem.

MADISON COUNTY.

The Madison County Medical Society met in regular session September 28 at Pendleton. This was the first meeting following the summer vacation.

Dr. L. F. Moblen presented a report of a case of pregnancy complicated with diabetes insipidus and chronic hepatitis. Dr. Etta Charles read a paper on "A Brass Monkey."

A resolution was introduced by Dr. F. G. Kellar, for the purpose of eliminating the members of this society who are too freely making use of the lay press in unpaid advertisements; also the club and contract doctor. This will be considered as special business at the October meeting.

Adjour ned.

BEN H. COOK, See.

NOBLE COUNTY.

The Noble County Medical Society met in regular session September 21. The meeting was called to order by the president, Dr. Morr.

Dr. Fred R. Clapp was appointed as delegate to the State Medical Association to fill the vacaney of Dr. J. L. Gilbert.

The matter of taking up the postgraduate course of study was discussed and it was decided to meet the first Tuesday after the first Monday in October at Albion, at 7 p. m., to organize and arrange the work.

The secretary was instructed to send a telegram to Dr. J. L. Gilbert, wishing him a successful outcome from his operation and a speedy return to health and happiness.

The papers of the afternoon were: "Chronic Interstitial Nephritis," Dr. John Green, of Albion, discussing "Its Etiology and Symptoms;" Dr. C. A. Gardner, Kendallville, "Its Differential Diagnosis;" Dr. G. B. Lake, Wolcottville, "Its Medical Treatment," and Dr. B. F. Kuhn, Elkhart, "Its Surgical Aspect." A general discussion of the papers followed.

Adjour ned.

F. R. CLAPP, Sec.

SPENCER COUNTY.

The regular meeting of the Spencer County Medical Society was held at Rockport, September 22. The members of the society named on the program being absent, topics of interest were discussed.

Dr. H. Q. White was elected representative to the state association meeting.

Adjour ned.

H. Q. WHITE, Sec.

BOOK REVIEWS

MEDICAL INSPECTION OF SCHOOLS. By L. H. Gulick, M.D., Director of Physical Training, New York Public Schools, and L. P. Ayres, General Superintendent of Schools of Porto Rico, 1906-1908. Cloth, pp. 276. Published by Charities Publication Committee, New York. Price, \$1.00, postpaid.

This little work, containing as it does a discussion of the nature and aims of medical inspection of schools, its history, and technic, together with suggestions to inspectors, forms, charts, tables, etc., cannot but prove most timely. So young is the subject in this country as yet that all literature pertaining thereto is most welcome.

MEDICAL CHEMISTRY AND TOXICOLOGY. The new (2d) edition, revised. A Text-book of Medical Chemistry and Toxicology. By James W. Holland, M.D., Professor of Medical Chemistry and Toxicology, Jefferson Medical College, Philadelphia. Second revised edition. Octavo of 655 pages, fully illustrated. Philadelphia and London, W. B. Saunders Company, 1908. Cloth, \$3.00 net.

This text-book, arranged particularly for first and second year students of medicine, should prove of considerable assistance to those in collegiate years, in so far as its aim is evidently to bring into relation academic chemistry and its practical medical application.

Additions to this second revised edition to be especially noted are those relating to the electronic theory, chemical equilibrium, Kjeldahl's methods for determining nitrogen, classification of alkaloids and proteins, chemistry of food, and the latest improvements in urinary tests.

The book is of value to the practitioner who has need for a concise reference to matters of chemical or toxicological interest. It is to be regretted that the subjects of ptomaines, toxins, agglutinins, and opsonins are touched upon so lightly.

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ORIGINAL ARTICLES

A CONSIDERATION OF THE PROPHYLAXIS AND TREATMENT OF CICATRICIAL RECTAL STRICTURE.

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INDIANAPOLIS, IND.

When we review the prevailing differences of opinion as regards the treatment of cicatricial rectal stricture, we cannot fail to recognize its essential interest, and regard it other than a subject of great importance. A careful review of surgical literature clearly demonstrates that surgeons are not as yet of one and the same opinion as to the method of surgical interference which should be practiced in the treatment of cicatricial rectal stricture. At the last annual meeting of this Society, when this same subject was before us for discussion, it was evident that our opinions as to the best method of surgical treatment were somewhat varied. While presenting no criticism of the surgical measures now employed; while advocating no new surgical measure, the writer desires to express his views, basing his opinions upon the results in the treatment of 55 cases. The period comprised is May, 1902, to January, 1908.

Age period.	Total Cases.
1 to 10 years.....	1
10 to 20 years.....	4
20 to 30 years.....	17
30 to 40 years.....	16
40 to 50 years.....	11
50 to 60 years.....	5
60 to 70 years.....	1

Age.—The average age was 34 years. The youngest patient was 5 years of age; the oldest, 68. Fifty-five per cent. were between the ages of

20 and 40 years. Eighty per cent. were between the ages of 20 and 50 years.

Sex.—Thirteen cases occurred in males and 42 in females.

Nationality and Social Status.—All the patients were American born. Twenty-six were white and twenty-nine colored. The social status of these patients is best explained by the following statistics: Ninety per cent. were seen and treated at the Indianapolis City Hospital, an institution to which only charity patients are admitted; 2 per cent. were seen at Bobbs' Free Dispensary; 8 per cent. were private patients.

Etiology.—The following table gives, as accurately as could be determined, the probable exciting or primary cause of the stricture:

Syphilis	18
Gonorrhea	2
Tuberculosis	8
Operation for internal piles.....	9
Injury during child birth.....	6
Pressure from displaced uterus.....	2
Cause undetermined	10

This table shows that in 20 cases a positive history of a venereal disease was obtained.

Location.—Fifty-four of the strictures were found within the first three inches above the anus; one was found six inches above the anus.

Variety and Caliber.—Ninety-seven per cent. were of the tubular variety and all were of an exceedingly small caliber. In 3 per cent. a small annular stricture was found.

Complications.—In the eighteen cases in which a positive history of syphilis was obtained, extensive skin tabs and condylomata were present, and numerous ulcerations were found both above and below the stricture. Recto-vaginal fistula was found in nine cases. In fourteen cases there was found a single complete fistula. In five cases multiple fistulae were present (in one case there

* Read before the American Proctologic Society, at Atlantic City, N. J., June, 1909.

were eight external openings, one of which connected with the rectum, one with the urethra and one with the right-hip-joint). In one case an extensive horseshoe fistula was found. In one case there was present hypospadias, and the feces passed through the urethra. In all but four cases the stricture was complicated by ulcerations and points of suppuration.

Duration of Symptoms.—In some cases it was exceedingly difficult to determine with any degree of certainty or satisfaction the period during which there had existed symptoms which in any way could be referred to the rectum. The average period was six and one-half years. The shortest period was three months and the longest thirty-one years. In fifteen cases symptoms had been present for more than ten years. In seven cases only, had symptoms been present less than two years.

Previous Operation.—In thirty-three cases no diagnosis had been made, and no treatment whatever had been applied to the stricture. In twenty-two cases previous surgical interference had been practiced as follows:

In 11 cases.....	1 operation
In 4 cases.....	2 operations
In 3 cases.....	3 operations
In 1 case	4 operations
In 3 cases.....	5 operations

These statistics clearly demonstrate the tendency of cicatricial rectal stricture to recur.

Symptoms.—The symptoms varied, and were those with which all of you are familiar. Pain varying in its intensity was an ever-present symptom. In one case there had been no bowel movement for seven weeks; in one case, for four weeks; in six cases for two weeks; in one case, for nine days; in twelve cases, for seven days. No bowel movement for three and four days was a frequent symptom. A history of diarrhea alternating with constipation was obtained in many cases. In some cases diarrhea and constipation were present at the same time. Incontinence was frequently observed. A discharge of pus, blood and mucus was a common symptom. Fever was almost always present, the thermometer showing an elevation of from one to five degrees.

Treatment.—The surgical measures employed were as follows:

Complete posterior proctotomy.....	32 cases
Gradual dilatation	7 cases
Forceful dilatation	5 cases
Excision	1 case
Left inguinal colostomy.....	3 cases
Enterostomy	2 cases
Surgical interference refused.....	5 cases

Results.—In one case death occurred eighteen hours after forcible dilatation had been performed. Autopsy revealed a rent, five inches in length, in the lower sigmoid, and the abdominal cavity contained feces. This patient had not experienced a bowel movement for seven weeks. In another case death occurred from hemorrhage on the ninetenth day following complete posterior proctotomy. This case had been previously operated four times, but I am unable to state as to the surgical methods employed. In another case death from diffuse septic peritonitis occurred on the tenth day following a left inguinal colostomy. The stricture in this case was six inches above the anus. Autopsy revealed perforation of an ulcer in the descending colon. The patient upon whom an enterostomy was performed for the temporary relief of an acute intestinal obstruction, died one year later from pulmonary tuberculosis. A few weeks following the enterostomy, a complete posterior proctotomy was performed, and three weeks later the opening in the small intestine was successfully closed.

Of the fifty cases operated upon, four have regained health, and my last examination found them to be free from any signs or symptoms of stricture. Three of these were cases of small annular stricture and a cure was effected by gradual dilatation. One tubular stricture was removed successfully by the excision method. Failure has resulted in 92 per cent. of the fifty cases of cicatricial rectal stricture operated upon by the writer.

Prophylaxis.—Any surgical measure employed for the relief or cure of a rectal disease may be followed by a rectal stricture. This is especially true if rectal surgery is performed by inexperienced men. Proctologists have reported strictures following the employment of certain surgical measures; but the stricture being recognized early, it is usually of large caliber, and prompt and efficient treatment effects a cure. Rectal surgery, therefore, should be performed by competent surgeons. Any surgical measure which shows a tendency to a resulting stricture should be discarded. A good, reliable and safe rule is to employ only those surgical methods which will give us ideal results. It is true that occasionally, no matter what surgical measure is employed, a stricture may result.

The writer is of the opinion that if each and every member of this Society was asked, "Have you ever had a cicatricial rectal stricture, of small caliber, develop in a patient whom you had treated for rectal inflammation or ulceration, and who had given you every opportunity for treatment?"

a negative reply, in all probability, would be received.

Strictures of the esophagus and urethra are somewhat similar to those of the rectum, in that they are the result of an inflammatory process. An individual swallows a corrosive of some kind, and although thickening or ulceration may result, yet correct treatment prevents a resulting esophageal stricture. An individual suffering with syphilis or tuberculosis presents the symptoms of pain during deglutition. A careful esophagoscopy reveals the presence of an inflammation or ulceration; and if so, correct local and constitutional treatment prevents a resulting cicatricial stricture. The same is true in case an individual suffers with urethritis. It is quite true that urethral stricture is as prevalent as ever, but it cannot be proved that it is the result of correct treatment of the primary or exciting disease. It is possible, I believe, by correct treatment, to prevent esophageal and urethral stricture. Since all cicatricial strictures are the result of some inflammatory process, it must necessarily be true that correct and systematic treatment will prevent the formation of a cicatricial rectal stricture.

The statement has oftentimes been made that inflammation and ulceration may involve the rectum, and yet produce no symptoms. A careful, systematic interrogation of a patient will usually elicit some rectal symptoms in case inflammation or ulceration be present. Since cicatricial rectal stricture is the result of some inflammatory process, its prophylaxis must necessarily imply careful interrogation and a systematic physical examination of the patient. Careful interrogation and systematic physical examination imply an early diagnosis. An early diagnosis implies correct treatment and prevention of a stricture. The physician or surgeon should be alive to his responsibilities and obligations to his patients. If, after having made an early diagnosis, he is not prepared to give the treatment necessary, he should not hesitate to avail himself of expert services. If it were only possible that every physician and surgeon would recognize the importance of an early diagnosis of inflammation and ulceration of the rectum, then the proctologist could not say that strictures are too often permitted to reach an advanced stage before expert services are secured.

Treatment.—Of the various methods of surgical treatment which have been advocated, the writer desires to consider the following:

1. Excision.
2. Complete posterior proctotomy.
3. Colostomy.
4. Gradual dilatation.

A personal record of failure in 92 per cent. of my cases has not in any way, I assure you, made

me pessimistic; on the contrary, I am inclined to be rather optimistic as to the results which can be obtained as a result of correct surgical treatment. Conclusions cannot and should not be based upon the statistics which the writer has presented to you to-day. These results were obtained in the treatment of strictures in a class of patients upon whom correct and systematic after-treatment was impossible. The average period they would remain in the hospital was twenty-six days. Once out of the hospital almost invariably meant a cessation of all after-treatment. While it is true that my statistics do not enable me to base my statements on actual facts, yet I have very decided views as to what can be accomplished by the above-mentioned surgical measures, provided systematic and correct after-treatment is practiced.

Excision.—Of the surgical methods employed, excision, provided infection can be prevented, is the ideal one. This statement is verified by the statistics which have been presented to us by Dr. James P. Tuttle. Excision should never be attempted in a case where the stricture is complicated by extensive ulcerations and points of suppuration. It, therefore, cannot be performed successfully in all cases. Excision must necessarily imply the selection of appropriate cases. In addition, it implies a competent surgeon, absolute certainty of technic, and every precaution as to asepsis, if successful results are to be secured. In ten cases seen during the past year, excision was performed successfully once. In another case it was begun, but fearing infection, a complete posterior proctotomy was performed. In the remaining eight cases complications were so prevalent that its performance would surely have been followed by infection. We cannot deny the fact that in carefully selected cases, excision, properly performed by a competent surgeon, gives ideal results, and easily takes first rank as the operation of choice. Ball says: "In suitable cases when simple dilatation fails, it has much to recommend it." On the other hand, some well-known surgeons say that it should never be attempted in any case. It is true that the results following excision have not been universally good, yet the reports of authenticated cures are sufficient to warrant its employment in carefully selected cases. The only authenticated cure the writer is able to report occurred in the case in which the excision method was performed.

Complete Posterior Proctotomy.—This surgical measure, even though some claim it has resulted in no authenticated cure, should by no means be abandoned. It, like excision, has its field of usefulness; and in certain cases, where excision is

contraindicated, fairly good results may follow its employment, provided the after-treatment is carefully and correctly carried out. I am unable to report an authentic cure following this surgical method; yet, in one of my cases of tubular stricture in which complete posterior proctotomy was performed and systematic after-treatment pursued for more than one year, there has been a symptomatic cure which has lasted for one year. There still remains a slight degree of thickening at the site of the stricture. Regulation of bowel movement, keeping cleanly the rectum by irrigation, and the daily passage of sounds or bougies has caused a disappearance of all ulcerations, the cessation of all discharge, and, as far as I am able to determine, there is no evident tendency to contraction on the part of the slightly thickened tissues. The patient believes a cure has been effected, and it is with the greatest difficulty that I persuade her to continue treatment.

If complete posterior proctotomy is to be performed, the incision should extend from above the stricture directly backward through the entire thickness of the indurated tissue, through the sphincters and skin, down to the tip of the coccyx. The writer has never experienced a permanent incontinence in any of his cases in which this surgical measure has been practiced. I have never considered it a dangerous operation, nor have any symptoms arisen which would cause me to fear its performance in selected cases. The statement that the stricture tends to recur is very true. This can only be avoided by systematic and energetic after-treatment. Such an after-treatment must embrace the following essentials:

1. Careful regulation of bowel movement. By this I mean one regular daily stool. This can be attained by a judicious employment of the various methods of treatment at our command.

2. After the daily stool, a careful and free irrigation of the rectum with medicated solutions, with the idea of keeping the diseased parts as cleanly as possible.

3. The regular and systematic passage of sounds or bougies.

This after-treatment will necessitate much patience and time on the part of both the surgeon and the patient; but an intelligent patient can, after a few weeks, easily carry out the treatment and thus relieve the surgeon of a very tedious work. I have seen it faithfully and rather successfully carried out by a patient, who had been operated upon previously with no success. The rectal symptoms in this case have disappeared. If the importance of strict adherence to such a line of after-treatment is explained to the intelligent

patient, he or she will cooperate with the surgeon and will do anything which will offer any hope of a cure. The time required is the only objection to this operation. Dr. A. B. Cooke has said that, were he the patient, he would certainly select the bougie, which would keep him comfortable indefinitely instead of facing the dangers of extirpation. If I were the victim of a rectal stricture similar to what was observed in the majority of my cases, I should certainly choose complete posterior proctotomy as the operation of choice, fully believing that I could effect a symptomatic cure by correct after-treatment. Excision has a limited field of usefulness. It is not devoid of danger and undesirable sequelæ; but when practiced successfully in carefully selected cases, its results are all that could be desired. In unsuitable cases its results are not ideal, and it has no advantage over complete posterior proctotomy. If complete posterior proctotomy cannot effect an authentic cure, but can relieve all symptoms, then it is an operation which possesses some degree of merit, and it will continue to occupy a certain field of usefulness in the treatment of cicatricial rectal stricture.

Colostomy.—The writer is unable to confirm the statement, so frequently made, that colostomy is an operation of last resort. It, like excision and complete posterior proctotomy, has its field of usefulness. Cases are seen in which tubular strictures are so complicated as to render other surgical measures impracticable. It is with much regret that, in many of my cases in which complete posterior proctotomy was performed, I did not perform a colostomy at the same time. The results would have been more satisfactory, for undoubtedly the combined operations would have enabled me to keep in close touch with my patients for a longer period, and this would have afforded me an opportunity for better after-treatment. Although Dr. William M. Beach considers permanent colostomy as the treatment of choice for syphilitic strictures, I am of the opinion that our results will be more successful if a complete posterior proctotomy be performed at the same time, and local treatment be begun without delay. If colostomy alone or combined with complete posterior proctotomy fails to effect a cure, but all rectal symptoms are improved, then excision, properly performed, will probably effect a cure in the majority of cases.

Gradual Dilatation.—This operation is not devoid of danger. In fact, the writer has such a fear of this surgical measure that he never performs it except in cases where there is a very small annular stricture. In advanced cases it only

alleviates and never effects a cure. It requires much time and perseverance on the part of both the surgeon and patient. This operation is similar to the one practiced in advanced esophageal stricture. Any one who has had much experience in the treatment of cicatricial esophageal stricture fully appreciates the necessity of employing the utmost care and gentleness in the manipulation of esophageal sounds. The same is true in dilating urethral stricture. The same, therefore, must necessarily be true in gradual dilatation of cicatricial rectal stricture.

CONCLUSIONS

It can be said that of the surgical measures employed in the treatment of cicatricial rectal stricture, excision, complete posterior proctotomy, colostomy and gradual dilatation have their fields of usefulness. No one of these surgical measures is applicable to every case. Each case must be studied carefully, and the operation of choice should be the one best suited to the existing conditions.

Prophylaxis implies a careful rectal examination; a careful rectal examination implies an early diagnosis; an early diagnosis implies correct treatment, and correct treatment implies the prevention of a stricture.

When cicatricial rectal stricture is diagnosed, surgical intervention is indicated. In cases where there is no danger of infection, excision should be the choice of all the surgical measures at our command. If successful, its results are ideal because of the fact that it effects a cure by the complete removal of the stricture. In cases where it is not safe to practice the excision method (and there are many such cases), complete posterior proctotomy or colostomy, either alone or combined, should be performed. While neither of these surgical measures have effected an authentic cure, yet they undoubtedly can and have effected a symptomatic cure. Gradual dilatation should be employed only in cases of small annular stricture. In such cases it is possible that a symptomatic cure can be effected by this surgical measure. The excision method needs no defense, as its results are all that could be desired. As for the other surgical methods, I am not at all pessimistic as to the results which can be obtained, if they are followed by correct and systematic after-treatment.

I trust that, after a later date, I may be able to verify the opinions expressed here to-day, by reporting better statistics regarding the treatment of cicatricial rectal stricture.

MELANURIA, WITH REPORT OF A CASE.

B. W. RHAMY, M.D.

FORT WAYNE, IND.

Melanuria, on account of its comparative rarity, is an interesting condition found in pathological urine. The color of urine varies considerably. Normally it is of a light yellow color, due to urobilin, a derivative of the bile pigments. This color varies according to the concentration of the urine, a very dilute urine showing a straw color, while a highly concentrated one shows a deep reddish-yellow color. This deep color occurs in the concentrated urine of fever. Pathologically the color of urine shows many variations, often of much diagnostic import. Numerous drugs will change the color markedly. Among these may be mentioned: carbolic acid, which causes a black color to develop on standing; napthalin, hydrochinon, resorcin, pyrocatechin, salol, and indican, which often produce a dark color on standing. Rhubarb and senna cause alkaline urine to become brown or blood red. Methylene blue causes a blue or greenish discoloration.

Discolorations may follow the administration of quinin, antipyrin, thallin or sulphonal. Homogentisic acid, a product of tyrosin, is a pigment causing alkapttonuria, a condition which sometimes occurs in certain chronic diseases, and in which the urine turns black on standing, is of syrupy consistency, and gives a reaction to the Fehling sugar test. In ochronosus, characterized by blackening of the cartilages, the urine turns black on standing. This pigment also seems to be a product of tyrosin. Distinctly black urines can be said to be due to the following causes: long standing cases of jaundice, some hematurias, hemaglobinuria, melanotic sarcoma, alkapttonuria, ochronosus, and the presence of excessive amounts of indoxyl-potassium sulphate.

Melanin is a brown or black pigment occurring physiologically in the epidermal tissues, where it is associated with keratin. It is found in the choroid coat of the eye, in the hair, and according to Adami it occurs in the brain membranes, near the choroid plexus, to some extent in the bronchial glands, the lungs and connective tissue. It is quite marked in the choroid and in the skin of negroes and absent in albinos. Pathologically, it is found in great amount in melanotic tumors, and, according to Purdy, to a slight extent in repeated attacks of intermittent fevers and in certain wasting diseases. There is some physiologic increase of this pigment in pregnant women, as shown by pigmentation of the nipples. The various discolorations of the skin occurring in

exophthalmic goitre, neuroses and Addison's disease are probably somewhat of this nature. However, the striking and excessive development of this pigment occurs in melano-sarcoma or melanosis. Abel and Davis calculated that the skin and hair of a negro do not contain more than 1 grain of melanin. In melanotic growths the amount is large, even as much as 300 grains. Chemically melanin differs from hemoglobin in that it contains only traces of iron and a large proportion of sulphur, which, according to Adami, sometimes amounts to 10 per cent. The other constituents are carbon, nitrogen, oxygen and hydrogen. The purer the melanin is the less iron it contains. Melanin is soluble in boiling mineral acids, boiling acetic and lactic acids, and strong solutions of the alkalies. Its coloring power is intense, as shown by the calculated amounts found in the negro's skin. This pigment is a transformation product of proteids, and can be made synthetically by boiling proteids with sulphuric acid. The browning of a cut apple is said to be due to this pigment. Quoting from Adami, as to the origin of melanin and the melanoid bodies: "Von Fürth regards them as developed by the action of intracellular oxidases (tyrosinase) of the aromatic or chromagen groups of the protein molecule." In favor of this view is the fact that tyrosinase is present in the ink sacs of cuttlefish, whose pigment "sepia" is similar in composition to melanin. However, as tyrosin is not a decomposition product of melanin, and in view of the fact that indol and skatol are found, as decomposition products, Adami inclines to the view that these bodies, rather than tyrosin, are involved in the process.

Melanosis or metabolic pigmentation was first accurately described by Laennec in 1806. He applied this term "to a morbid state of the system associated with the development of multiple pigmented tumors, marked chiefly by the presence of abnormal pigment in the blood, urine and other body fluids." Emerson says that "melanuria occurs in cases of melanotic tumors which have invaded the viscera." This is an interesting observation since it is a common thing to have cases of melano-sarcoma in which the urine does not show melanin. Von Jaksch says that "as long as the growth is confined to the primary lesion or the neighboring lymph glands the urine is free from pigment." According to Adami, when there is extensive and rapid development of the melanotic growth, the pigment escapes into the blood and appears in the urine, wherein it is excreted either as fully developed melanin or as its chromagen, melanogen, which darkens on oxidation. This oxidation converts melanogen into melanin.

Usually the pigment is present in the form of the chromagen, and for that reason the melanotic urine develops the dark color after standing. In case the fully-formed melanin is present in abundance, Bland-Sutton believes that this is a sign of grave import. The darkening by oxidation is apt to occur rather rapidly and is hastened by the addition of nitric acid or other oxidizing agents. The color in the standing urine shows first at the top and extends downward.

The pigment may occur in the urine either in solution or as granular sediment. The tests for melanin are delicate and characteristic. One very delicate test is made by adding a few drops of bromine water to the urine; this causes a yellow precipitate to fall which turns black. Another test used is the Legal test for acetone. This is made by the addition of a few drops of acetic acid to equal parts of caustic potash and urine. In the case of acetone a ruby red color appears; while in the presence of melanin, a deep blue color develops due to the formation of prussian blue. This color also occasionally appears in the presence of some other urinary substance which Von Jaksch believes to be indol. The most delicate and reliable test is the ferric chlorid test, which Emerson says is characteristic and of great diagnostic value. Von Jaksch recommends this test as of specific value and states that with the nitro-prusside test it is conclusive. The test is made as follows: A few drops of concentrated solution of ferrie chlorid are added to the urine. In the presence of melanin a grey precipitate will fall. If more chlorid be added a black precipitate is redissolved. The following case is reported as an interesting manifestation of this urinary state:

On Jan. 12, 1909, two samples of urine were received for examination from Dr. L. O. Malsbury, of Peru, Ind. The samples were respectively morning and evening specimens, and labeled as being from Mrs. O., aged 38, married, and with a doubtful diagnosis of pregnancy. The analyses were made and the reports were as follows:

MORNING URINE.

Acidity, 35° 1-10 NaOH; specific gravity, 1023; color, dark wine. Albumin, faintly positive (Spiegler test). Sugar, negative. Diazo reaction, very marked. Melanin tests, strongly positive. Microscopic examination showed a bare trace of blood cells, leucocytes, and epithelial sediment.

EVENING URINE.

Acidity, 40° 1-10 NaOH; specific gravity, 1025; color, deep caramel. Albumin, faintly positive (Spiegler test). Melanin tests, very marked. Diazo, marked. Microscopic examination same as morning specimen.

These are the condensed points in the analyses, other clinical tests being negative. In making the reports the writer commented on the presence of melanin, noting that its occurrence in such amount warranted grave suspicion of melanotic growth, and a request was made, out of clinical interest, for a description of the case. In response to this request Dr. Malsbury kindly sent me the following history:

PERU, Ind., Jan. 13, 1909.

B. W. RHAMY, M.D., Fort Wayne, Ind.:

Dear Doctor:—In response to your suggestion I am very glad to submit the history of the case, and shall be grateful to hear from you as to your opinion, as I must admit I am somewhat puzzled. The specimens were from a woman, 38 years of age, with no history of tuberculosis or hereditary disease. About May, 1908, nearly eight months ago, she developed a condition which still exists, in which areas on the forehead, neck, arms and body present an appearance very much like varicose veins. The irregular enlargements are blue, like veins, and they are not large. There are perhaps fifty little "bunches" of them on the different parts mentioned. About six months ago her menses stopped and she is enlarged at the present time about as a woman that is seven or eight months pregnant should be. She says she has felt the movements of a child. She has given birth to four healthy children, all of whom are living. Her youngest is four years old, the others, respectively, seven, ten and thirteen. She has slight dropsical conditions of the legs. She is about her average weight, but is of slight build when she is well.

She may possibly have been pregnant for a month or two before her menses stopped. May there not have been some pressure somewhere which caused the apparent varicosities? Of course, she might have been mistaken about feeling movements, but having been pregnant four times before it would seem that she would know the sensation. Of course, if she is not pregnant there might be a tumor; but I am disposed to believe that she is pregnant. You ask if the deep color was present when the urine was passed. It was. She eats well, the bowels move naturally and have a natural color. The color of her skin is darker than her natural color, but only slightly. I should be glad to hear from you further in regard to the diagnosis and especially in regard to the varicosities.

Yours, L. O. MALSURY.

In reply to this very interesting report the writer gave his opinion that the findings pointed to melan-sarcoma and that the abdominal enlargement was probably a large tumor, while the so-called varicosities were multiple metastases. Later, when discussing this case with Dr. M. F. Porter, the suggestion was made that both pregnancy and malignancy might be present.

On January 22 another report was received from Dr. Malsbury. He said:

Dear Doctor:—I want to write you again in regard to the case of melanuria. As I told you before, it is a case in which I was "stumped." The patient insists that she feels movement and that she is pregnant. She

is getting darker in color, a sort of port wine color. I think now, as you suggested, that she has melanotic tumors, but am not certain. I told the husband that I was not sure of what the trouble was. There has been some suggestion that there might be gall-stones, but there have never been any symptoms to indicate that condition. Do you think it would be advisable to take her to Fort Wayne?

Respectfully, L. O. MALSURY.

At this time an effort was made to get the patient into the hospital for the purpose of a careful clinical study, and arrangements were made, but owing to progressive weakness she did not come. On February 21, or just one month later, the patient died.

Unfortunately no postmortem or other evidence could be obtained to complete the history of this interesting case; but in the writer's opinion it was a case of melanosis, and the abdominal enlargement was due to a large tumor. In the absence of positive proof, of course, this diagnosis can only be speculative, for, as pointed out, pregnancy and malignancy may occur together.

REFERENCES.

- Adami: Principles of Pathology.
- Emerson: Clinical Diagnosis.
- Von Jakob: Clinical Diagnosis.
- Purdy: Practical Urinalysis.
- Bland-Sutton: Tumors; Innocent and Malignant.
- Kirke: American Edition Handbook of Physiology.
- Rieder and Delephine: Urinary Sediments.
- Reference Handbook of the Medical Sciences.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from page 425, Vol. II.)

ALPHABETICAL LIST OF DECEASED PHYSICIANS.

I wish to state that this is not a complete list of all the deceased physicians of Indiana. The Transactions of the Indiana State Medical Society are my principal source of information. Preferably, we must first do honor to this body of men who have been the real promoters of legitimate medicine in our state. Suppose no society had been organized in 1849, or any subsequent year, what would be our present condition? The State Society necessarily led to annual meetings, and the creation of useful medical and scientific papers, and these were preserved in our Transactions. The State Society encouraged the several medical journals that have existed in our state, and that have been so helpful to the profession. Our Transactions, medical journals, medical col-

leges and the valuable laws on our statute books, we may say without undue praise, have been brought about through the self-sacrifice and energy of the men whose names are found upon the records of our State Society from 1849 to 1909.

I have sought for names elsewhere in cases where they deserved recognition. In some instances ancient tombstones have supplied dates. After all my pains, and the help of good friends, some names will be overlooked, and I shall sincerely regret such omissions. I have sent letters to every county society in the state asking for names of deceased physicians who lived in their midst. Many have responded; some have not, so I must not bear all the blame.

Space will not allow lengthy notice of individuals, and some of their friends may be disappointed because I have failed to write more concerning their personal history, but I have endeavored to do justice to all. As the names of my friends of the past have come up before me my eyes have moistened and I have felt loath to cease saying kind words about them.

I may say that I have aimed to devote more space to the earlier physicians of the state, rather than to those of a later generation. Also to honor those who have rendered more marked service to medicine and surgery. The aim is to record the correct name, residence, date of birth and date of death. Often this supplies all the information desired, but the reader can, if he chooses, find reference to the particular volume of Transactions, where fuller details can be secured.

I have aimed to give title and reference to papers contributed by deceased members and published in the Transactions, so that the sketches are helpful as an index.

I desire to call especial attention to the obituary notices recorded in the Transactions. Generally, they have been written by personal friends who knew the deceased, and recorded interesting facts which are worthy of perusal. In many instances they contain valuable historical information.

I must record a tribute of praise to the memories of Drs. J. R. Beck and J. F. Hibberd, who inaugurated the Section of Necrology in 1879. Dr. Beck was chairman of this committee one year, 1880, when his name was added to the death list of 1881, and Dr. Hibberd succeeded him as chairman and continued in this capacity until 1899, when he also went on that unreturning visit, leaving the work for others to assume. In 1900 Dr. G. W. H. Kemper was appointed to the chairmanship and has continued to the present time. And so, for thirty years a pathetic and historical register of our deceased professional

brethren was an annual source of surprise and sorrow.

Finally, I regret that some physicians have been so sensitive over their names in medical journals and medical biographies. In many instances this over-sensitiveness has hindered my work when I have searched for information concerning individuals. A physician's good name and example ought to be an incentive to younger members of the profession. If he has wrought well, his deeds and works are the common heritage of the profession.

I wish Dr. Stone had compiled a book on Indiana physicians that would have comprised all the medical men of the state, then my task would have been needless or easier.

"Along the village streets, where maples lean
Together like old friends about the way,
A faithful pair oft and anon were seen—
He and his nag, both growing old and gray;
What secrets lurked within that old soul's breast:
Of mother-love, of throb of pains and ills.
All safely kept beneath that buttoned vest,
Receptacle of powders and of pills.
Thrice happy he when some fond mother's eyes
Grew moist with love unspeakable to find
Snugged to her breast her babe whose paradise
Within her soul and bosom were entwined.
How oft he held the wrist to mark the slow
Pulsations of the feebly-fluttering heart,
While his kind words, soft murmuring and low,
Essayed to calm the mourner's pain and smart.
He was to all a father, brother, friend;
Their joys were his, their sorrows were his own.
He sleeps in peace where yonder willows bend
Above the violets that kiss the stone."

—HORACE S. KELLER, in *New York Sun*.

Abbreviations: "S. T." Transactions State Medical Society; "I. M. J." Indiana Medical Journal; "J. I. S. M. A." Journal Indiana State Medical Association;"Robson," The Physicians and Surgeons of the United States, 1878, Charles Robson; "Stone," Biography of Eminent American Physicians and Surgeons, 1894, R. French Stone, M.D., Indianapolis.

ABORN, ORIN—Marshfield (1826-1885) S. T. 1886, 202. Was assistant surgeon of the 40th Reg. Ind. Vols.

ADAMS, JAMES M.—Marion (1820-1894) S. T. 1895, 404.

ADAMS, JAMES MC.—Frankfort 1839-1888) S. T. 1889, 213. Contributed "Report on the prevailing diseases of the Seventh Congressional District." Trans. 1871, 83, and 1872, 111.

ADAMS, JAMES R.—Petersburg (1824-1903) I. M. J., Vol. xxii, 335. Was assistant surgeon of the 58th Reg. Ind. Vols. and later surgeon of the 15th Reg. Ind. Vols. in the Civil War.

ADAMS, MARCELLUS M.—Greenfield (1835-1909) Jour. Ind. State Med. Assoc., Vol. ii, 404. Was assistant surgeon of the 116th Reg. Ind. Vols.

ADYLOTTE, WILLIAM R.—Badger (1834-1885) S. T. 1885, 220.

- AIKMAN, EDGAR A.—Clinton (1855-1906) S. T. 1907, 492.
- ALEXANDER, STEPHEN J.—New Albany (1812-1891) S. T. 1891, 284.
- ALEXANDER, WILBUR.—Frankfort (1869-1906) S. T. 1907, 478.
- ALLEN SETH.—Shideler (1845-1898) S. T. 1898, 386.
- AMICK, CHRISTOPHER C.—Hayden (1849-1901) S. T. 1901, 480.
- ANDERSON, OLIVER F.—Wheeling (1839-1883) S. T. 1884, 210.
- ANDREW, WILLIAM P.—Laporte (1809-1906) I. M. J., Vol. xxv., 80.
- ANDREWS, DANIEL H.—Muncie (1811-1856).
- ANTHONY, EMANUEL.—Indianapolis (1840-1903). Born in Loudon County, Virginia, May 27, 1840. He served in the 141st Reg. Ohio Vols. In 1879 he was elected to the chair of surgery in the Physio-Medical College of Indiana, which he filled until 1898. He was then appointed to the chair of principles and practice of medicine in the same institution, which he filled until the time of his death. W. A. Sprugeon.
- ANTHONY—SAMUEL P.—Muncie (1792-1876).
- ARDERY, JOSEPH C.—Decatur County (1825-1854). Was born in Decatur County, Jan. 28, 1825, and died at Hartsville, Nov. 28, 1854. He was present at the formation of the State Medical Society, 1849.
- ARDERY, OSCAR.—Anderson (1859-1897) S. T. 1898, 380.
- ARMINGTON, WILLIAM.—Greensburg (1808-1862).
- ARMITAGE, DAVID R.—Delaware County (1831-1891) S. T. 1892, 280.
- ARMSTRONG, LEWIS P.—Newtown (1836-1905) S. T. 1905, 439.
- ARMSTRONG, WESLEY.—Hillsboro (1832-1884) S. T. 1884, 219.
- ARMSTRONG, WILLIAM G.—Lafontaine (1822-1881) S. T. 1881, 243.
- ARNOLD, JOHN.—Rushville (1815-1902). For biography see Am. Biog. Hist. of eminent and self-made men of the State of Indiana, 1880, Dist. 6, 1.
- ARTHUR, CHRISTOPHER C.—Portland (1832-1898) S. T. 1899, 395. Born in Highland county, Ohio, Sept. 15, 1832, and died at his home in Portland, Oct. 16, 1898. He was a graduate of the Starling Medical College, and soon after graduation located in Camden, Jay county. Dr. Arthur was a natural mechanic and always resourceful in surgery. The author has seen a remarkably excellent trephine which Dr. Arthur constructed out of an old hand saw, and used in an early day to good purposes in many cases. In 1862 he raised a company for the Seventy-fifth Indiana Volunteers and was elected Captain. A few days later he was appointed surgeon of the regiment. He was captured while in charge of a hospital soon after the battle of Chickamauga, and sent to Libby prison where he was in confinement for six months. Upon his return home he was twice elected County Auditor of Jay county. After the expiration of his terms of office he resumed practice in Portland. In the State Transactions for 1893, page 188, may be found an exceeding valuable paper contributed by Dr. Arthur, entitled "Fractures of the Skull with Injuries of the Brain."
- T. In this paper some sixteen cases are described and all are of great interest and show the skill of no ordinary surgeon.
- ARWINE, JOHN S.—Columbus (1824-1905), S. T. 1906, 491.
- ATKINS, JOSEPH.—Lafayette (1812-1904), I. M. J., Vol. xxii, 368.
- AUSTIN, CHARLES B.—Veedersburg (1825-1890), S. T. 1890, 163.
- AUSTIN, STEPHEN S.—Etna (1821-1884), S. T. 1885, 216.
- AVARDICK, HENRY G.—Oldenburg (1826-1892), S. T. 1893, 254. See I. M. J., Vol. xi, 144.
- AYRES, HENRY P.—Ft. Wayne (1813-1887), S. T. 1888, 208. Dr. Ayres was a native of New Jersey. Graduated from the University of New York in 1842, and located in Ft. Wayne the same year, where he resided until his death. Was elected president of the State Society in 1871. He contributed the following papers to the Transactions: "Report on Obstetrics,"—1859, 30; "Epidemic Dysentery in Allen County in 1845, 1854, 1856, 1864,"—1867, 127; "Indiana's Idiotic Children,"—1868, 106; "Self Pollution in Children,"—1871, 161; "President's Address,"—1872, 1.
- AYRES, STEPHEN D.—Marion (1811-1898), S. T. 1899, 390.
- BAKER, JOSEPH H.—Lafayette (1854-1893), S. T. 1894, 223. See I. M. J., Vol. xii, 293.
- BAKER, MOSES.—Lafayette (1823-1888). Case of Cesarean section, operation Nov. 6, 1880. Mother and child saved. I. M. J., Vol. ii, 1. "Post-partum Hemorrhage," S. T. 1885, 136.
- BAKER, PHILIP S.—Indianapolis (1851-1901), S. T. 1902, 408. For ten years prior to his death he held the professorship of chemistry in the Medical College of Indiana, and was recognized as one of the leading chemists of the country. I. M. J., Vol. xx, 154.
- BAKER, THOMAS H. B.—Pekin (1838-1905). S. T. 1905, 440.
- BALLARD, CHIESTER G.—Perryville (1792-1858). Dr. Ballard was born in Wendell, Mass., Jan. 14, 1792, and died at Perryville, June 21, 1858. He formerly practiced at Waveland, and was present at the formation of the State Society.
- BALLARD, NATHAN H.—Richmond (1849-1898). S. T. 1899, 401.
- BALLARD, S. H.—Haubstadt (1856-1885). S. T. 1885, 218.
- BALLOU, A. B.—Burnettsville (1831-1893). S. T. 1894, 224.
- BARKER, ANDREW J.—Tipton (1840-1883). S. T. 1883, 273.
- BARNS, WILLIAM C.—Marion (1850-1905). S. T. 1906, 495.
- BARTHOLOMEW, BRADLEY.—Danville (1804-1902). S. T. 1903, 332.
- BARTON, GAYLORD G.—Washington (1809-1884). S. T. 1884, 217.
- BATES, AARON J.—Kokomo (1843-1906). S. T. 1906, 497.
- BAUER, MODESTUS.—Vincennes (1830-1884). S. T. 1884, 223.
- BEARD, FERDINAND W.—Vincennes (1835-1891) S. T. 1891, 283. Born in Harrison county, Indiana, Feb. 7, 1835, and died at Vincennes, Feb. 11, 1891. He

was a practitioner of medicine for thirty-four years. He was one of the original members of the Knox County Medical Society, and was especially active in various professional societies. He was a regular attendant and active worker in the State Society, and was Vice President in 1875. He deserves mention for his loyalty to his county and state societies.

BECK, ELIAS W. II.—Delphi (1822-1888). S. T. 1889, 211. Born in Mifflin county, Pennsylvania, Jan. 18, 1822; graduated at University of New York in March, 1848. Previous to graduation he served as assistant surgeon in the U. S. Army during the Mexican war, being attached to the general hospital at Matamoras. In the spring of 1848 he began to practice at Delphi. In 1850 he crossed the plains to California where he practiced for four months. In 1851 he returned to Delphi where he continued to practice until his death, which occurred Oct. 6, 1888. During the Civil War he was for one year surgeon of the Third Indiana Cavalry Regiment, six months a brigade surgeon, and for eighteen months surgeon of a division. On the night of July 3, 1863, while on duty at his hospital at the Presbyterian Church in Gettysburg he discovered the beginning of the retreat of the Confederates, and promptly reported the fact to General Hancock. Dr. Beck is accredited with having made a resection of the shoulder joint, in which four inches of humerus was removed, the patient recovering with a fairly useful arm. (Med. and Surg. Hist. of the War of the Rebellion, Part 2, Surg. Vol., 550.)

BECK, JOSEPH R.—Ft. Wayne (1843-1880). S. T. 1881, 243. Born at Lancaster, Ohio, March 19, 1843; died at Ft. Wayne, Dec. 30, 1880. He practiced at Toledo and Lancaster, Ohio, and since 1871 at Ft. Wayne. He was professor of gynecology and genito-urinary diseases in the Ft. Wayne college of medicine at the time of his death. It was upon the motion of Dr. Beck at the May meeting of the State Society in 1879 that a committee of necrology was created. He was appointed as Chairman and served the following year, at which time his death occurred, and Dr. J. F. Hibberd succeeded as Chairman. He contributed a number of articles to periodicals, and in transactions of 1875, 95, a paper on Iodide of Potassium, and in 1880, 100, an article on "Tumors of the Anterior Walls of Vagina." He was also the author of a paper published in the Am. Jour. of Obs. in 1874, entitled "How do the Spermatozoa Enter the Uterus?" See also Robson, p. 522.

BECKES, LYMAN M.—Vineennes (1862-1904). S. T. 1905, 441.

BEER, HENRY M.—Valparaiso (1838-1903). Was a native of Ohio. In June, 1861, enlisted in the Twenty-third Regiment, Ohio Volunteers, and soon afterward was made hospital steward of same regiment. Later he served as a contract surgeon at Cumberland, Md. In 1868 he located in Valparaiso, where he spent the remainder of his life. Dr. Beer was a skillful physician and surgeon, and was loved by his fellowmen.

BERRY, GEORGE.—Brookville (1811-1892). S. T. 1892, 292. Dr. Berry was a member of the State Constitutional Convention, and represented Franklin county in the State Senate and House of Representatives, and filled several county offices. During the Mexican War he was surgeon of the Sixteenth Regiment U. S. Infantry. Dr. Berry stood high as a local surgeon.

BERRYMAN, JAMES A.—Darlington (1836-1896). S. T. 1897, 345.

BEVER, JOHN C.—Vineennes (1819-1903). S. T. 1903, 333.

BEVERLY, JOHN E.—Winchester (1816-1888). S. T. 1889, 207.

BIGELOW, JAMES K.—Indianapolis (1833-1886). S. T. 1886, 218. Born at Bellebrook, Ohio, Oct. 17, 1833; died at Indianapolis, June 1, 1886. When the Governor called for three months volunteers in 1861, he volunteered as a private and at the end of this term re-enlisted, was made hospital steward Eighth Indiana Volunteers; was commissioned as an assistant surgeon October, 1862, and promoted to surgeon July, 1863.

BLACK, NORMAN W.—Selma (1827-1880). S. T. 1881, 235.

BLAIR, FRANKLIN.—Princeton (1859-1907). S. T. 1907, 482.

BLOUNT, CYRUS N.—Kokomo (1832-1887). S. T. 1888, 209. Dr. Blount contributed two articles to the State Society, "Diabetes Mellitus," S. T. 1874, 91; and "Cerebral Softening, with Report of a Case," ib. 1887, 116.

BLUNT, MARCUS S.—Vernon (1826-1881). S. T. 1882, 198.

BOBBS, JOHN S.—Indianapolis (1809-1870). Was born at Greenvillage, Pennsylvania, Dec. 28, 1809, and died at Indianapolis, May 1, 1870. Dr. Bobbs located at Indianapolis in 1835, but took a course of lectures in Jefferson Medical College the same year, graduating in 1836. When the Medical College of Indiana was organized, he was elected professor of surgery, and later dean of the faculty. Dr. P. H. Jameson says that the latter part of his life was devoted mainly to surgery, and that "he was original and bold almost to recklessness." Dr. Bobbs was one of the original commissioners who organized the Indiana Hospital for the Insane. He was a state senator for one term. During the Civil War he was brigade surgeon on the staff of Gen. T. A. Morris. At his death he gave \$2,000 for a dispensary, and \$5,000 for a free medical library. He was not an extensive contributor to medical or surgical literature. In The Transactions of the State Medical Society for 1868, 1, may be found Dr. Bobbs' address as President of the society. It is a valuable paper, and is entitled, "The Origin, Objects and Progress of the Indiana State Medical Society." In that paper he makes a special plea for the establishment of a medical journal, to be the organ of the profession in the state. The crowning glory of Dr. Bobbs' professional life is his well earned reputation as the "Founder of Choleceystotomy," inasmuch as he was the first to open the gall-bladder. The operation was performed June 15, 1867, the patient, a woman thirty years of age, made a thorough recovery, and is living at the present time. The original paper, which has elicited so much interest of late years, was entitled "Case of Lithotomy of the Gall-Bladder," and was published in the State Transactions, 1868, 68. Republished in full in I. M. J., Vol. xxiv, 26. The reader who may desire to consult the literature on the subject of Dr. Bobbs and the first case of choleceystotomy, can do so by the following additional references: Indiana Medical Journal, Vol. xvii, 432; Vol. xviii, 177, 277; Vol. xxi, 193, and a most elaborate report on the case and patient by Dr. A. W. Brayton, in the same Journal, Vol. xxiv, 21, 55, with a picture of the patient, p. 38.

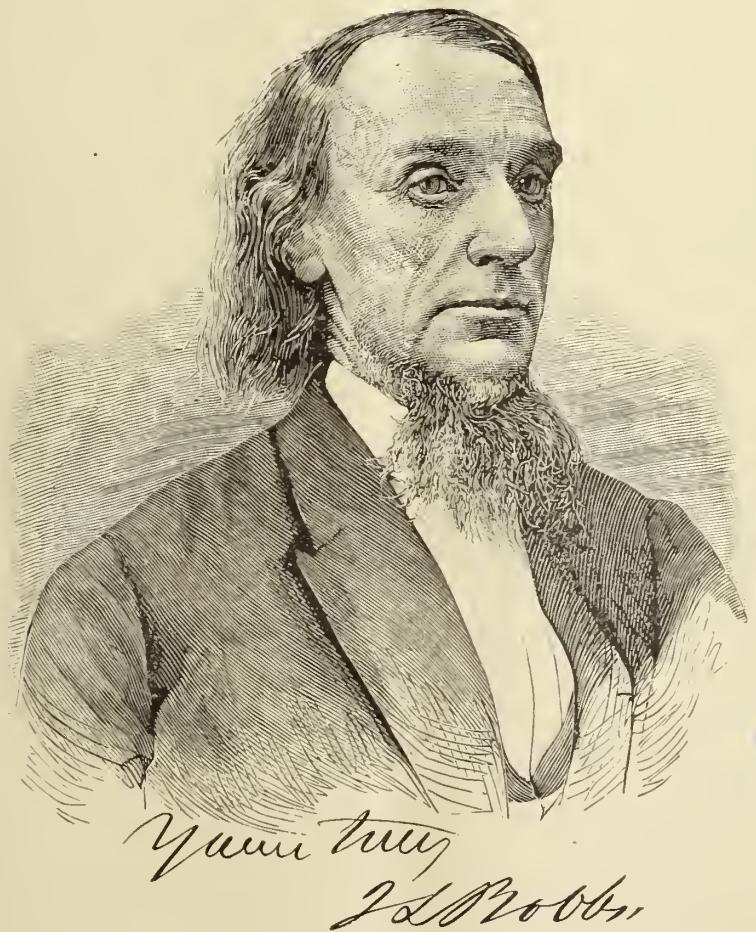
Also, on p. 33, same journal, a "Memorial of Dr. Bobbs," by Dr. P. H. Jameson. His last contribution to surgery was written a few days before his death: "Two Cases of Nævi in Infants, Treated by Ligation and Excision; and Excision Alone." Ind. Jour. Med., Vol. 1, 33 (May, 1870).

BOND, RICHARD C.—Aurora (1822-1904). S. T. 1905, 442.

BOOR, WALTER A.—New Castle (1849-1897). S. T. 1898, 375.

BOOR, WILLIAM F.—New Castle (1819-1907). Dr. Boor first located in Henry county in 1846, having removed from Ohio. With the exception of a few

at the Ohio Medical College in 1848, and soon after began practice at Jacksonburg, and later removed to Centerville. In 1862 he was appointed surgeon of the Eighty-fourth Indiana Volunteers, and remained with that regiment until near the close of the war. He then located at Dublin, where he continued to practice medicine until the date of his death. Dr. Boyd was a typical family physician. In 1876 he was elected President of the State Medical Society. Besides President's address, 1877, he has contributed the following papers to the transactions of the state society: "Veratrum Viride," Trans. 1874, 31; "Tobacco," 1876, 23, and "Medical Legislation," 1884, 17.



years' residence later in Ohio, he continued to reside in Henry county until his death, which occurred July 17, 1907. He was surgeon of the Fourth Indiana Cavalry regiment during the Civil War. It was his boast that in his long span of life, he never used intoxicants or tobacco. Robson, p. 617.

BOUNELL, MATTHEW H.—Lebanon (1822-1896). S. T. 1896, 271.

BOWERS, ANDREW J.—Moore's Hill (1827-1902). S. T. 1902, 409.

BOWLBY, JOSEPH.—Shelbyville (1854-1906). S. T. 1907, 490.

BOYD, SAMUEL S.—Dublin (1820-1888). S. T. 1888, 213. Born in Wayne county, Indiana, March 31, 1820, and died April 16, 1888. Dr. Boyd graduated

BRADBURY, ALLISON B.—Muncie (1842-1892). S. T. 1892, 289.

BRADY, C. C.—Lincolnville (1852-1895). S. T. 1896, 255.

BRANDON, JOSEPH F.—Anderson (1835-1888). S. T. 1888, 210.

GRAY, MADISON J.—Evansville (1811-1900). Dr. Gray was born at Turner, Maine, 1811, and graduated at Bowdoin Medical College in 1835, and located the same year at Evansville. He filled the chair of surgery in Evansville Medical College for about twelve years; was surgeon at the marine hospital, Evansville, for four years; surgeon in the United States army three years, and later at St. Marie's Hospital. In 1855 he was President of the Indiana State Medical Society.

He contributed several papers on cancer, lithotomy, and tumors. In Vol. i, 4th Ed. Gross' Surg., p. 217, mention is made of a fatty tumor which Dr. Bray removed, weighing nearly forty pounds. He died Aug. 22, 1900, at the age of 89, having lived in Evansville for 65 years. Ob. I. M. J., Vol. xix, 122.

BRIDWELL, LAFAYETTE.—Owensburg (1844-1903). S. T. 1903, 334.

BRITTAINE, STEPHEN H.—Loogootee (1836-1904). S. T., 1905, 443.

BROOKS, WILLIAM H.—Ft. Wayne (1813-1894). S. T. 1895, 405.

BROWER, JEREMIAH H.—Lawrenceburg (1798-1866). Ob. Cin. Jour. Med., 1866, i, 493-495. Memoir by Prof. C. G. Comegys. Author of article on "Camp Diarrhea." Trans. 1863, 45. Was President of the State Society in 1853.

BROWN, CLAY.—Indianapolis (1826-1862). Was assistant surgeon of the Eleventh Regiment Indiana Volunteers. Died on board steamer *John Roc*, at Crump's Landing, Tennessee River, of typhoid pneumonia, March 11, 1862, aged thirty-six years. S. T. 1862, 49.

BROWN, SAMUEL M.—New Bethel (1822-1904). I. M. J., Vol. xxiii, 34.

BROTHERS, GUY M.—New Paris (1875-1906). S. T. 1907, 480.

BRUNT, SAMUEL F.—Summitville (1849-1883). S. T. 1884, 207.

BRYAN, T. N.—Indianapolis (1833-1902). S. T. 1902, 407.

BULLARD, TALBOTT.—Indianapolis (1815-1863). Dr. Bullard was a native of Massachusetts, and a descendant of Puritanic stock. He came to Indianapolis about the year 1844, where he formed a partnership with Dr. Mears. He was a physician, with no desire to invade the domain of surgery. It was not his practice first to use emetics or cathartics, or both, to prepare the system for the use of quinin, as was the custom of many in his day. He declared that delays often allowed the patient to die, so he gave that remedy in full doses from the start, whether the patient had fever or no fever. In 1850, Dr. Bullard had a painful experience in his obstetric practice. Dr. Holmes had not yet promulgated his views on the contagiousness of puerperal fever, but it was demonstrated in the work of Dr. Bullard who lost ten cases in one year, when he sadly abandoned all obstetric work for some months. In 1862, Dr. Bullard organized and conducted for a time a hospital for sick Confederate soldiers confined at Camp Morton. He went on a mission to attend Indiana soldiers at Vicksburg, and while in the line of duty contracted a malignant dysentery. He returned home to survive but a short time, dying prematurely at the age of forty-eight. (See Trans. Ind. State Med. Soc. 1894, p. 212j.)

BUNTON, EDWIN A.—Greensfork (1846-1899). S. T. 1899, 407.

BURK, GEORGE L.—Jamestown (1820-1891). S. T. 1892, 282.

BURKE, GEORGE W.—New Castle (1841-1901). S. T. 1902, 410. I. M. J., Vol. xx, 226.

BURLINGAME, E. G.—Oakland City (1867-1909).

BURTON, GEORGE W.—Mitchell (1836-1898). S. T. 1899, 388.

BYERS, ALEXANDER R.—Petersburg (1829-1897). S. T. 1898, 378.

BYFORD, WILLIAM H.—Chicago (1817-1890). The subject of this sketch was born at Eaton, Ohio, March 20, 1817; when he was a mere child his parents removed to New Albany, Ind., where they remained but a short time, and then removed to Crawford county, Ill. Here the future physician began to learn the trade of a tailor, and later removed to Vincennes, Ind., where he continued to work at his trade. Colonel Vail, with whom I served in the Civil War, told me that he had often seen young Byford sitting on his bench at work, with a Latin grammar at his side, with which he employed every spare moment. He began his practice at Owensville, Ind., under the custom then prevailing in this state, armed with a certificate signed by three commissioners appointed for the purpose. He graduated at the Ohio Medical College in 1844. He practiced at Mt. Vernon until 1850, when he removed to Evansville to accept the chair of anatomy in the Evansville Medical College. In 1852 he was transferred to the chair of Theory and Practice, a position he retained until 1856, at which time the school ceased to exist. He continued to practice in Evansville until 1857, when he was called to Chicago to fill the chair of Obstetrics and Diseases of Women and Children. His rapid rise in that city was a pride to all his Indiana friends, but can be only alluded to in this article, which is confined to Indiana triumphs in medicine. Educating himself in the midst of lowly poverty, and rising to a high rank as a practitioner, lecturer, and author, his life and example are a stimulus to others. His distinguished son, Dr. Henry T. Byford, was born in Evansville, Nov. 12, 1853. In the Transactions of the Indiana State Medical Society for 1854, p. 78, Dr. Byford contributes "Report of the Proceedings of the American Medical Association."

(To be continued)

RESULTS OF NEGLECTED APPENDICITIS. ILLUSTRATIVE CASES.*

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The title of this paper implies that the author is an advocate of the early operation in all cases of appendicitis, and from this point of view the appellation "neglected" is correct.

The neglect is not always on the part of the attending physician. In many instances the case has been neglected by the patient himself, or by the family, in the case of children, and in some instances (relatively few nowadays, but withheld entirely too frequently) by the physician.

The German and English professions might object to the word "neglected" as applied to the cases about to be reported, because they were all operated. A perusal of most German writings on appendicitis will show what we, in this country, would term a too conservative treatment of the

* Read before the Indiana State Medical Association, at Terre Haute, Oct. 7, 1909.

disease. Operation is not done at once. Suppurative processes are allowed to become walled off before operation is resorted to. In the meaning of this paper such cases are neglected because the time was when the disease could have been cured by the operation without the necessity of an abscess developing or in fact any suppuration occurring in the abdominal cavity.

The occurrence of suppuration within the abdomen makes possible many complications and sequelæ among which may be mentioned phlebitis and pylephlebitis of various veins, abscess of the liver, pelvic inflammation, necrosis of the intestinal walls and fistulae, pneumonia and pleurisy, ileus from adhesions, and others.

A number of writers recognize phlebitis as one of the complications of appendicitis and most all operators have had illustrative cases. The American Text-Book of Pathology says: "Thrombosis of the veins of the mesentery and great omentum and suppurative portal pylephlebitis are common." In 86 fatal cases of appendicitis tabulated by Kelly and Hurdon there were 10 of pylephlebitis and liver abscess.

As an example of phlebitis following appendicitis I may report the following:

CASE 1.—Mrs. F. B., 40 years of age. Has always had good health. Family and personal history negative as regards any bearing on this illness. On March 4, 1898, was taken with abdominal pain, nausea and vomiting, due, as she thought, to improper food. The pain soon settled in the right flank and was accompanied by tenderness on pressure. Operation recommended and refused. She grew worse. The abdomen became distended and more painful on pressure, the fever rose and the pulse increased in frequency. It was not until the fourth day of the disease that she consented to operation. When the belly was opened, a rather large collection of pus was evacuated from about the appendix before it could be freed from its adhesions and removed. Gauze drainage was employed, and the case progressed favorably for five days, when the right leg began to swell and pain. At the same time there was an increase of the fever and pulse-rate. The leg was bandaged, elevated and external heat applied. After several weeks the constitutional symptoms subsided, but more or less swelling remained in the leg for months afterward. At the site of the gauze drainage a large hernia developed.

Now it must be apparent to all that had this case been operated within a few hours after the onset she would in all probability have escaped the phlebitis and the hernia.

Not only may appendiceal suppuration be responsible for phlebitis, but septic emboli may

gain access to the portal circulation and be arrested in the portal radicles in the liver, producing abscess of the liver. This fact is mentioned in Stengel's Pathology, p. 584.

The following is quoted from Nothnagel's Encyclopedia: "Embolic hepatic abscess may occur in cases in which the perityphilitic abscess is old and almost completely cured, or is, at all events, quite latent, and when the local manifestations of perityphilitis have completely disappeared." He cites an illustrative case of a man, 35 years of age, who had "inflammation of the cecum" in 1890, but recovered in two weeks and was well till March, 1894, when septic fever developed and proved fatal in June. Phlebitis starting from a small almost cured perityphilitic abscess with secondary abscesses of the liver and embolism of the lungs was found at the necropsy.

Dieulafoy speaks of the condition of multiple abscesses of the liver as the appendicular liver.

The following case is an example:

CASE 2.—H. S., 42 years of age, a cobbler, was seen by me Nov. 4, 1905. He gave a history of peritonitis in 1893, which was treated by incision and drainage, resulting finally in what was thought to be a recovery. But he has had occasional attacks of chills and fever, accompanied by more or less marked jaundice ever since then. The last one occurred a year before his fatal illness. When I examined him, Nov. 4, 1905, he was again jaundiced. The liver was enlarged uniformly. The splenic dulness was increased in area. He had irregular chills, followed by high fever and profuse sweats. Ascites made its appearance and became so great that he was tapped several times. He died of sepsis on Dec. 9, 1905. The autopsy showed the omentum plastered to the parietal wall throughout. The appendix was dug out of a mass of old adhesions. The liver was universally adherent. Incision into it allowed the escape of a large amount of pus from a number of foci. There were no hydatids nor was there any suspicion of amebic dysentery.

Undoubtedly this condition was the result of his neglected appendicitis, and there was a time in the history of that case when the offending organ could have been removed without the necessity for such serious results following.

Another result of neglected appendicitis is illustrated by the following case:

CASE 3.—E. F., 13 years of age. Family history negative. Never had any serious illness. On March 24, 1907, was taken with abdominal pain, which localized in the right side that night. He had no medical attention till the 28th, because his symptoms were attributed to something he had eaten. On this date the signs of peritonitis were well marked and a mass could be made out in the right side. He was taken to the Lutheran

Hospital, where the abscess was evacuated, a gangrenous appendix containing an enterolith was removed and a generous drain introduced. He made the usual recovery. During the following summer he worked in a bakery and seemed as well as he ever had been. In September of the same year he developed a tenderness and pain in the appendix region with some fever, and I was asked to see him again. On opening the belly I found things much the same as they were the preceding March. Everything was adherent and structures unrecognizable. Several pockets of pus were evacuated from the region of the appendix. After patient labor the cecum was finally isolated and recognized as the seat of the chief pathology. It was so infiltrated and altered that suspicions of malignancy arose. It was removed with great difficulty and an end-to-end anastomosis made between the ileum and colon. Again his recovery was uneventful and the specimen proved inflammatory. I have not heard from him since and presume, therefore, that he is well, but it must be evident that if he had been operated the same day he first took sick the second very dangerous procedure would have been obviated.

The following case is illustrative of the occasional relationship between appendiceal suppuration and pelvic inflammation:

CASE 4.—Miss G. R., school girl, 15 years of age, was taken two years ago with abdominal pain, fever, etc., and treated for a week for typhoid fever, when, a tumor developing in the right side, she was removed to the Lutheran Hospital and the abscess drained. The resulting sinus refused to heal. After waiting six weeks the appendix was removed, and in three weeks more she left the hospital about recovered. Shortly after getting up she noticed pains shooting down the right thigh. At times these would be very severe. However, she was not confined to bed until the 28th of March, 1909, when she developed rather suddenly a very severe pain in the rectum. It was at this time that I first saw the case. Rectal examination revealed a very large pelvic abscess, and from the history I imagined the sequence of events. She was taken to the Lutheran Hospital, where the third laparotomy was performed by me (the former operations being done by a colleague of mine). The sigmoid was found just under the incision in the left rectus and it formed one wall of a large abscess cavity. The coats of the sigmoid were infiltrated and eroded, but not perforated.

Both tubes and ovaries were removed because of the extensive disease. The right ovary was unrecognizable because the seat of a large tubo-ovarian abscess. The eroded bowel was placed under the incision and drainage so arranged as to hold it there in case the erosion should go on

to perforation. She made a perfect recovery and is now practically well, although the menses have not made their appearance.

What a really pitiable spectacle! A young girl sterilized and subjected to hazardous operations because of a failure to recognize and remove a diseased appendix at the opportune moment before suppuration had commenced. Her first symptom, abdominal pain, should have led to the suspicion of appendicitis, and this leads me to recall to your minds the fact that pain (except that of appendicular colic) is usually a late symptom of appendicitis and denotes peritonitis. Especially is this true of tenderness on pressure. There may have been no previous subjective symptom, but when tenderness is present from a surgical standpoint we have a symptom which is due to the beginning of peritonitis and therefore a late symptom. The previous pathology may have gone on without producing any subjective symptoms, as, for instance, the well-known fact that one may carry an enterolith in the appendix for years and be completely unaware of its presence there until the ulceration it induces goes through to the peritoneal coat of the appendix. When such a case is opened, one hears wonderment that so much damage could be possible in the time which has elapsed from the onset of the disease to the removal of the appendix. The explanation is that in that case the pain was a late symptom.

In the light of these and many similar cases, I am inclined to go counter to the prevailing teaching in many cases of appendiceal suppuration and be as thorough as it is possible to be in the individual case in the removal of diseased structures.

There is a difference in the causative agent in cases of appendicitis, as is the case in all inflammatory processes, and this should make a difference in their treatment. The very virulent infections act quickly, poison profoundly, and spread so rapidly that few, if any, peritoneal adhesions are formed. Some of these cases are doomed from the first, no matter what treatment is adopted.

Moynihan, *Abdominal Operations*, p. 444, says: "When the finger is discovering the limits of the abscess, the greatest gentleness is necessary, for rough handling may break down the limiting adhesions, and pus may escape into the general peritoneal cavity and start an acute peritonitis."

P. 445: "The question as to the need for the removal of the appendix has been hotly debated. My own practice is this: If the appendix comes into view at once, or after the simplest examina-

tion, I remove it; if, however, a prolonged search, during which adhesions have to be freely separated, be necessary, I do not make any attempt to remove it. . . . There can be no doubt, I think, that in many cases of abscess the removal of the appendix is unnecessary and that in almost all its removal involves far too much risk to be desirable."

May I be allowed to ask whether this is always a wise practice? The very fact that an appendicitis has resulted in the formation of limiting adhesions which have circumscribed and enveloped the products of such inflammation is an earnest that the same course will follow such manipulation as is necessary to effect the removal of the diseased organ even when some of the limiting adhesions have been broken. In the fatal cases these adhesions do not form at all, or very imperfectly, and this is the distinguishing prognostic feature.

When they are present and the abscess is perfectly walled off, this is evidence enough that the body's own defensive powers are capable of dealing with the infection already present and all that is demanded of surgery is the removal of the source or sources of the bacteria and, therefore, the diseased structures, whatever they may be, should be ablated whenever possible. Had this been done in the last case at the time the appendix was removed even, it is improbable the third operation would ever have been called for, and the girl would have lost but one tube and ovary instead of both.

DISCUSSION.

DR. GEORGE J. COOK, Indianapolis:—In recent years the neglect of cases of appendicitis is not as frequent with the general practitioner, as formerly, because the general practitioner is able to recognize these troubles quickly, and if he is not in surgery himself he can refer them to those in surgery. And the people are becoming better educated and do not object now, as formerly, to these operations, for there are few communities which have not had cases operated on successfully. But some cases have died, and they, perhaps, have been the cause of other deaths. For instance, you are called to see Tom Jones, who is suffering with appendicitis, with general peritonitis and a pulse that you can hardly feel. You may feel that there is no chance for that patient at all, but your duty to the patient is to operate, anyway, and the patient dies. Perhaps a neighbor will be taken with appendicitis. The physician comes and insists on operation, and the patient and his friends say, "Tom Jones was operated and died," and they refuse. Had you refused to operate Tom Jones you would not have done your duty, but the result of such an operation has a bad educational effect in that com-

munity. So the neglect now is not with the profession. The profession is getting well posted regarding the diagnosis, although there may be a little difference of opinion in regard to the time of operation. To illustrate this point, I will speak of a case I operated last Friday evening at 7 o'clock. The patient, a girl of 10, went to school on Thursday in one of the towns in the eastern part of the state. In the evening she came home with a pain in her abdomen and they sent for a doctor. She had eaten some raw turnips that morning and it was supposed that the turnips were responsible for the trouble. A doctor was called early Friday morning and he recognized the centering of the disease around the appendix, made a diagnosis of appendicitis and insisted upon operation. The family thought it was too hurried and said they would think about it. They then sent for another doctor, who came in and told them the same thing. They brought the child to Indianapolis at 4 o'clock that day and I operated at 7. She had a temperature of 103 and a pulse of 104, and was so tender I could not palpate the right side of the abdomen. I was expecting to find a badly inflamed appendix. When I cut through, the appendix presented immediately. I took it up and found it gangrenous, and when I drew it up the pus welled up from the pelvis. That was within twenty-four hours after the pain began. I carefully mopped the pus out, putting the gauze down with the greatest caution. To-day the patient is out of danger and she has had not a particle of pain from the time of the operation up to the present time. The surroundings have something to do with the question of immediate operation. I will report another case. I was called to North Indianapolis to see a case in a three-room house. The surroundings were bad. I recognized a pus case. We put the patient on a lounge, and we were intently interested in preparing the patient when feathers began flying about the room. One of the women wanting to make a soft bed for the patient had brought in a feather bed. If that had been a clean case, what would have been the result? So the surroundings frequently determine whether we can do an immediate operation or not, and in some cases we must trust to an ice-bag and strychnia rather than do an immediate operation. Of course, the ideal operation is done immediately after the diagnosis is made, supposing it to be a first attack. Get the patient to the hospital and operate within 12 to 24 hours. As a rule, the peritonitis does not extend much from the appendix within that time, and we can have the appendix off and close the patient up and he will get well quicker than he would if you put on the ice-bag and wait, and he will have no future trouble. Of course, you cannot always get them that way. Suppose you have a case of general peritonitis on the third day and gradually grow-

ing worse, with a pulse of 130 or 140 and a low temperature, perhaps not over a hundred, or even subnormal. What are you going to do with such cases? To subject them to radical operation, with the shock of the anesthetic added to the shock already present, would kill your patient. So what are you going to do? My rule is to adopt the Ochsner treatment plus something. Ochsner, you know, advises putting on an ice-bag and using strychnia, hoping the condition will be arrested and a circumscribed abscess will form. That is all right, but, in addition, you can do something else without adding to the shock of the patient. Make a hole in the abdomen under local anesthesia and let the pus and serum out.

DR. DAVID ROSS, Indianapolis:—Probably the cases we think of most in connection with this subject of neglected appendicitis are the pus cases or those cases in which appendiceal abscess has formed in the region of the cecum; and yet I have sometimes questioned if it is the acute cases of appendicitis that most unquestionably can be operated, and that every one will agree should be operated, that are the ones most neglected and need most consideration. We meet these cases most frequently in children where there are so many things to lay the pain in the stomach to—green apples and other indigestible food—and we are prone to make a snap diagnosis and conclude that the child has a colic. They may go on and recover and have attacks again and again until it dawns on some one's mind, or the case becomes acute, and the diagnosis is made correctly and the operation is made, or it is too late for operation. I believe that in these cases of chronic appendicitis we have some of the most neglected ones. There is not an operator but has had them come to him that possibly ended all right, and the worst features of them were not the localized conditions around the appendix, but often times various forms of nervousness and general ill health, and no one seems to know why. Not all these symptoms, of course, are attributable to appendicitis, but often times they are, and after operation our attention is called to the fact that the general health is better and the nervous symptoms gone. Dr. Morris, of New York, has called our attention to the fibrous appendix. All operations on the appendix are not to save life, though that is the great ultimatum. And yet sometimes life, if not unbearable, becomes far more burdensome than it should be when there is a trouble of this kind. If one becomes conscious that there is a pain somewhere which is constant, it is bound to tell in time. Dr. Morris states that most of these cases of fibrous appendicitis do not become a menace to life, as far as suppuration is concerned, but they may go far into adult life if not operated upon. Is it not well to operate, then, on account of their bad influence on the

general health? I recall a patient in a very important position who gave it up because of her supposed neurasthenia. Later the diagnosis of appendicitis was made and the woman operated upon, and her comment later on was, "Only to think how I suffered all these years and did not know the appendix was at fault."

DR. A. M. HAYDEN, Evansville:—We find a good many cases of chronic catarrhal appendicitis producing a distress in the stomach that people often call dyspepsia, catarrh of the stomach or chronic indigestion. I recall a number of cases that consulted me in regard to indigestion or dyspepsia who never thought they had any trouble with the appendix, but on examination I found a diseased appendix, and on its removal the dyspepsia disappeared. That is one of the points the doctor did not refer to in the paper. I believe that eight-tenths of all cases of chronic indigestion, as it is commonly called, are due to some disturbance of the appendix which involves both the ascending and transverse colon. Another class of cases not mentioned by either of the discussants is where we have no active symptoms; in other words, the symptoms of appendicitis are negative. The patient may complain of pain, temperature normal, pulse normal, and yet at operation on these cases in 12, 24 or 36 hours from the attack we find a complete gangrene of the appendix, and sometimes the head of the colon or cecum. I was called to a case six weeks ago where the patient was taken in the forenoon with pains in the bowels, with the pulse and temperature normal. The patient was 16 years old. I advised operation, but they refused. They telephoned me the next morning that the girl was all right, but at noon they sent for me. The pulse was 90 and the temperature 101. I said the case must be operated. They desired consultation and I selected an internal medicine man, Dr. Charles Knapp. He said, "You have a mild attack of appendicitis and the case ought to be operated on, of course." I said, "Doctor, you will find more trouble than you think." I insisted on his being at the operation. At 2 o'clock I operated and found the appendix and cecum gangrenous and removed them. This class of cases is overlooked by the surgeon and general practitioner, and if not properly cared for the results are very serious. Many people suffering with chronic appendicitis have complained of stomach or bowel trouble for months or even years. I recall a case that complained for three years and who had been in the hands of qualified physicians and surgeons during that time. I diagnosed appendicitis. We opened the abdomen and found the appendix badly diseased and trouble in the cecum. In six months he was back to work, while he had lost three years before on account of dyspepsia, catarrh of the stomach and intestinal indigestion.

DR. JOSEPH RILUS EASTMAN, Indianapolis:—The more I see of appendicitis the less I know about it and the less confidence I have in my ability to deal with these cases. When I began I felt the problem was an easy one, but as I went on I found it was not so easy, that it was rather a complicated one, and it has been my experience, even up to now, that it is extremely difficult to understand those distinguished men whom we concede have the right to opine about these matters like Ochsner and Deaver. At first one's impression, if he contemplates the statements of Deaver and Ochsner and sets one side over against the other, is that one or the other or both of them must be incorrigible liars, because Deaver tells us from his enormous experience he has come to the conclusion that it is the right thing to operate on every case on the spot, and Ochsner says it is the right thing to put the patients back to bed, starve them and wait until the time comes when it is safe to operate. If we watch these men in their clinics we discover there is not one whit of difference of opinion between them. You will observe Deaver says this is a case not safe to operate on. This time we must put it back to bed and starve it, and by observing Ochsner we find that he operates about as large a percentage of his cases of appendicitis as does Deaver or Morris or the other exponents of the radical and immediate operation, and I am still, I confess, very often in a quandary whether I should operate in cases of appendicitis or not. I wish I had arrived at such an adequate state of confidence that I could say, "This is a case for operation and this one is not." I wish I had the ability that some of my colleagues claim, to determine exactly which should be operated and which should not. I have within a month seen a case of appendicitis in a little girl with pus in the abdomen. When I came to see the child the abscess had already ruptured into the bowel, and there had occurred a discharge of an enormous amount of pus by the anus, and the little girl seemed to be getting better. Now I submit that I did not know what to do, but I thought I would err upon the side of safety and I did not operate. I could not see that it would be to any purpose to soil the intestines by pus which was washing out by the bowel. The child is now dead. Had I been notified later as to the course the case was taking I might have operated. *Hominis est ignoramus.* We do not always know what to do in these cases, and it is for that reason that a doctor from Fort Wayne comes before us again and instructs us on this all-important topic of neglected appendicitis which is of wonderful interest and high mortality. But if you will bear with me a minute I will mention just a few cases generally which I have seen. I operated yesterday on a case of appendicitis in the person of a young man who

had worked in the harvest field until 4 o'clock the previous day. I operated immediately after noon the next day, considerably less than 24 hours after the initial symptoms, and immediately following the knife wound the pus flew all over, literally by the quart, first thin and then a thick discharge. Now, it has been inconceivable to me that such an accumulation of pus could develop within so short a space of time, and I have mentioned my inability to understand that, and some one reminded me that in all probability the peritoneum can secrete this fluid with the same rapidity with which it can absorb, and we know that would be very rapid.

DR. SCHMAUSS, Alexandria:—There is one complication I would like to mention in connection with acute appendicitis, and that is acute endocarditis. If you will examine the heart of some cases assuming a rather virulent course, you will find not infrequently the endocardium is affected. It is a rather serious condition, and unless attended to at once by the local application of the ice-bag, etc., it may lead to a permanent crippling of the organ. Dr. Cook has stated that, as a general thing now days, the profession recognizes appendicitis and that leads to early operation. I do not quite agree, and I have been surprised many times during the past year to see typical cases treated as typhoid, and I know of two cases that died recently which were not recognized as appendicitis, one not operated until two weeks and the other not at all. And so if we want to prevent or abort complications we must recognize the disease more often and more accurately, and if we do that it will naturally lead to earlier operations. There is one great trouble in regard to appendicitis among physicians that is prevalent and deep seated. We hesitate to take a definite step and are influenced by various considerations, though it does not make any difference what we do; if the patient dies we are condemned and if he gets well the Lord did it. That explains why many cases are allowed to run along until some complication arises and we lose a percentage of cases. Dr. Cook also said we should open the abdomen under local anesthesia. I do not agree with him. There is a difference between a walled-off abscess and adhesions. If we have simple adhesions they do not mean very much. We may break them up and not do any harm, or if we have a small pocket of pus, that can be taken out. But it is different if we have a walled-off abscess. That case must be drained, but if it is still discharging pus that patient will not get well. The only case I ever lost was treated that way. I used local anesthesia. I would not do it again. I think general anesthesia under ether would do less harm than local anesthesia in a nervous subject. Of course, if you use a hypodermic beforehand, probably that nervousness might be done

away with. There is another point as to suppurative cases. If we would take into consideration the success that Murphy has had in saving forty of forty-one cases, it would teach us that we should leave these cases alone, and it is a question as to whether it is not better to open up and drain and put them in the Fowler position rather than leave them alone to die of some complication. I would rather lose a case in a fight to save it than to let it die from various complications without an effort to save it.

DR. H. O. PANTZER, Indianapolis:—A class of cases of neglected appendicitis not referred to should be mentioned here. It is that kind in which pus is early secreted and the patient makes an apparent recovery by the discharge of pus through the bowel. I say apparent recovery. Many of these cases recover slowly, and weeks of absorption of pus give rise to amyloid degeneration of all the glandular organs of the body. It pertains particularly to young individuals, and girls, I think, in my experience, more than boys. They are susceptible to amyloid degeneration from absorption of pus. I remember a family that congratulated itself on having escaped the surgeon. The child had recovered seemingly and was sent back to school two and a half months after the attack. In less than two years she was buried with parenchymatous nephritis.

DR. B. VAN SWERINGEN, Fort Wayne (closing):—I did not attempt to consider all of the conditions which might arise in every case of appendicitis. It is apparent from my paper that I am heartily in favor of early operation, because there is a time in the history of every one of these cases where the early operation can be done and complications prevented, and therefore they are the result of neglect on the part of some one. I would not say the physician always, because it is not. When a case such as Dr. Eastman describes is operated within 24 hours of the time of onset, it is usual to place the result from the time the pain began. I had such a case as that where a boy took the pain on Friday night, and on Saturday afternoon he was operated and the peritoneal cavity was full of pus. Now that disease undoubtedly existed before the onset of pain, as shown by the condition of the appendix, which was perforated and had a large enterolith in it. The trouble in the recognition of the condition before the onset of the pain was that there were no symptoms except those symptoms of indigestion spoken of by Dr. Hayden. On another occasion I operated a child that had pain that was thought to be due to improper food. It was gone over well by a competent physician who failed to recognize the appendix as the source of trouble, yet the belly was full of pus, and I expressed the opinion that the child would die with or without operation, but would give the benefit of drainage, not caring particularly about our mortality statistics.

INFLUENZA—ITS COMPLICATIONS AND TREATMENT.*

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Influenza is an acute, contagious disease, caused by the bacillus of Pfeiffer. The bacillus of Pfeiffer was first isolated by that investigator in 1892. It can be well stained by Loeffler's methylene blue or by well-diluted watery solutions of carbol-fuchsin. It presents the appearance of a small dumb-bell, having knobbed ends, and connected by a rod-like shaft. It develops in myriads on the nasal and bronchial mucous membranes and in the secretions of those parts. They have also been found in the blood.

A number of observers have shown that the bacillus is really distributed and spreads most actively by droplets of mucus. The poison may be carried by clothing and clings to infected apartments for some time. Even after a patient has recovered from an attack, his nasal secretions may reinfect himself, or other persons, for a period of weeks; therefore, all towels, pillow cases and other articles used by him should be boiled and the room disinfected before being used by others. Another important point is that no immunity is conferred by one attack. On the contrary, one attack seems to predispose to another, so that, with the reappearance of epidemics, one individual may suffer with two, three or more attacks.

It is therefore obvious that there is quite a distinction to be drawn between true epidemic influenza due to the bacillus, and the "common cold" or coryza, which is ordinarily called la grippe, and which does produce similar symptoms of a milder type. This disease is now believed by most, if not all, authorities to be a special disease of unknown etiology, and bearing the same relation to true influenza as cholera nostras does to Asiatic cholera.

This disease presents itself clinically in many different ways, so that there are about as many classifications and types of the disease as there are writers on the subject. But the classification, which seems to me to be the most simple and yet cover the ground presented by the symptoms, is as follows:

- I. Respiratory type.
- II. Gastrointestinal type.
- III. Nervous and mental type.

In the respiratory type the predominating symptoms are those which relate to diseases of the

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lungs, bronchial tubes and pleura. This type seems to be the most frequent one in this country, and in these cases the beginning symptoms are those simulating bronchitis, pneumonia, pleurisy, etc. Some authorities place, in this type, cases presenting cardiac symptoms. In these the patient suffers from repeated attacks of syncope. These instances are met with chiefly among patients who have persisted in remaining at work during the early stages of the disease, or who had, previous to the attack, an impaired heart muscle. Thus, a heart dilated as the result of excessive exercise, may succumb readily, or one in which early but hitherto unrecognized degenerative changes were developing, may suddenly fail.

In the gastrointestinal type the symptoms are mainly those of acute gastritis or iliocolitis, the attack being ushered in by vomiting, diarrhea and possibly with violent pain and collapse. In other cases pain is absent and profuse watery stools are present.

In the nervous and mental type, the symptoms consist of profound nervous and mental depression, or in severe neuralgic pains which may or may not be due to neuritis. Mental disturbances are by no means rare. Leichtenstern states that he met with fewer psychoses in 2,000 cases of typhoid fever and 3,000 cases of pneumonia than he found in 439 cases of influenza. These disturbances may be of the exhaustion type, but usually are due to a toxic state induced by the malady. The symptoms may develop during the stage of onset, the febrile stage or in convalescence. The prognosis is usually good, unless there is a bad history of heredity. Other more rare conditions developing in this type are meningitis, encephalitis, toxic neuritis and cerebral abscess.

It is difficult to separate the complications of influenza from the ordinary symptoms of the disease, because the natural course of the disease presents such diverse manifestations in different organs. But without doubt, pulmonary, cardiac and renal are the most common.

The most frequent of the pulmonary complications are chronic bronchitis, bronchiectasis, pneumonia, pleurisy and pulmonary edema. A very noticeable fact is the frequency with which old and latent tubercular lesions are fired up by true influenza. One author states that "attacks of influenza bear the same relation to the development of tuberculosis as do those of measles." A physician who formerly had charge of a tuberculosis sanitarium told me how forcibly he was reminded of this complication. On taking the history of the case when entering, they would start by saying, "Two years ago I had la grippe."

Another common and most distressing complication is otitis media. Two members of our own profession, residing not far from this locality, are sufferers from this trouble. One, to such an extent, as to be unable to carry on conversation at all without the use of a hearing device.

The cardiac complications may be divided into three classes: First, those who already have mild cardiovascular degeneration. Second, those having dilated feeble hearts. Third, those who persist in remaining at work after the attack begins and refuse to go to bed. These patients not only have cardiac difficulty during the attack, but frequently suffer from cardiac weakness and distress many weeks after convalescence should be well established. The man who persists in remaining out of bed when attacked by this disease literally "takes his life in his hands."

The renal complications develop in those instances when the kidneys have been impaired before the attack. Then an acute congestion or true nephritis is added to the subacute or chronic state, and uremia speedily comes on.

As the disease is highly contagious, it is not only desirable, but necessary, to isolate all cases wherever practicable or possible in private homes, and always in hospitals. E. W. White was successful in aborting an epidemic by the isolation of each and every case. Next, the secretions, especially those of the bronchial and nasal passages, should be disinfected. After the attack, the disinfection of the apartments, preferably with formalin gas, should regularly be practiced.

The next point in the treatment of the case is absolute and continuous rest in bed. This is true of mild as of severe cases, and of the patient who is stalwart as of the patient who is feeble. A robust man, who fails to rest, almost always suffers from a severe attack or from sequelæ, which may invalidate him for weeks. As the disease produces great prostration, a diet which is easily digestible and highly nutritious is essential for the maintenance of the strength of the patient.

As for the medicinal treatment, no specific is known; consequently the drug treatment is entirely symptomatic. As each of you use, and no doubt will continue to use, the drug which your experience has proven to be the most efficacious in the relief of certain symptoms, I shall only mention one or two merely for the purpose of condemning them.

First, the coal-tar products have been largely employed for the relief of the pain in the back and limbs. Although they give ease, they are harmful if the doses are large, and often fail if they are used in moderate amounts. They tend to increase nervous and circulatory depression, to

decrease the ability of the patient to resist the infection from which he is suffering, and the possible secondary infections which may occur. If the patient will rest in bed, they may be used moderately; if he will not rest, they should not be used at all, for they not only do harm directly, but by diminishing discomfort they enable and encourage him to remain out of bed.

Second, the continuous use, day in and day out, of strychnia. This drug is often given day after day purely as a stimulant. It is not a true stimulant, but a nervous irritant. It also loses its power after continuing over long periods of time, and often causes great irritability if not employed skillfully. If, however, circulatory failure is associated with nervous depression, strychnia is indicated, and it may be used in tonic doses during convalescence.

SPORADIC CRETINISM WITH CASE REPORT OF RESULTS OF THYROID FEEDING.*

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A cretin is something we of Madison County so seldom see that when we saw one sitting by the side of Dr. Rush in this society meeting last November we looked and looked again. Some recognized the picture at once and some did not; one said to me, "What the 'ells that, an idiot?" And so I believe we can get some profit by turning back to the anatomy, physiology, etiology and treatment of this, to us, rare condition. The information in our working libraries is so limited as to be practically useless. In my own library, on diseases of children, Carr tells the whole thing in 474 words, Holt in 199, Rotch in 519, Smith 1,260, while the works on general practice, Tyson, Osler and Thompson, devote from one to three pages to the various pathological conditions of the thyroid gland. This was totally inadequate to gain profitable knowledge on the subject, so I am indebted to Dr. M. A. Austin's library for the loan of Richardson's book, "The Thyroid and Parathyroid Gland." And my effort has been to give you the gist of it.

The thyroid body is a highly vascular gland, consisting of two lobes, an isthmus and a pyramid situated between the second and sixth tracheal rings, covered anteriorly by the sternohyoïd, omohyoïd, and sternothyroid muscles, while the sterno-cleido-mastoid also overlaps it.

The posterior surface is concave and rests on the trachea and larynx, covering the recurrent laryngeal nerves. The lateral lobes cover the carotid arteries, are conical in shape, extending from the fifth or sixth tracheal ring to the side of the thyroid cartilage, covering the inferior corners and adjacent portions of the alae. The isthmus usually lies across the second and third tracheal rings, but is inconstant in shape and position and may be entirely absent.

The gland appears to be smaller in females than in males, increasing in size during pregnancy and menstruation. The arteries of the gland are the superior thyroid from the external carotid and inferior thyroid from the thyroid axis. They are remarkable for their anastomoses and large size. The lymphatics form numerous and large anastomosing trunks, both at the surface and through the body of the organ. The nerves are derived from the middle cervical ganglia of the sympathetic and accompany the blood vessels. Accessory thyroids are common, being formed by detachments of small portions of the gland in the embryonic stage. The parathyroids are two small pairs of glandular masses, always lying in close proximity to the lateral lobes of the thyroid body, are flattened and of a reddish color, somewhat like the thyroid itself. In structure they differ from the thyroid proper, being composed of solid masses of epithelial-like cells which often appear to be sections arranged in anastomosing columns with numerous convoluted blood vessels between them. Scientific experimentation on dogs shows that after complete excision of the thyroid and parathyroids the great majority of dogs die within a few days and can not be saved by thyroid feeding. In operations if one or more parathyroids are left, the dogs as a rule survive. Early physiologists looked upon the thyroid gland as having no function. From its size and position it was supposed to be purely cosmetic. The laity early recognized the connection between it and the organs of generation. Measuring a woman's neck before marriage and after, an increase in the size was considered as evidence of conception. The function of the thyroid gland is said to commence in utero, or soon after birth. Horsley considers that it commences before birth, but is greatest during the period of growth, lessening as the vital processes decline. He bases his opinion on the decrease of the secretory power of the gland in phthisis, in which the colloid substance disappears and the epithelial cells pass into the embryonic state, from the fact that removal of the gland is more fatal in young than in older

* Read before the Madison County Medical Society, May, 1908.

animals and that it decreases both in size and activity in old age.

Richardson says he had analyzed the thyroid glands of several children who died immediately after birth, and also a few prematurely born, and has never been able to find a trace of iodin or of the blood pressure reducing substance. In children of two and three weeks who had died of cachexia no iodin was found. The earliest age at which he found iodin was three months. There is a remarkable difference between the calf and the human fetus; in the calf the thyroid contains iodin in utero. As it has been shown

suffering from malnutrition, I usually hunt for about three months for a suitable food, when, behold, for some unknown reason the child starts to growing. A word to the wise is sufficient: Add a little desiccated thyroid to the food. The function of the gland has been studied chiefly by the indirect method of observing the symptoms after removal of the gland from animals and some cases in man where the gland was removed for disease.

Myxedema is subdivided into cretinism, endemic, and sporadic—which are the cases of congenital absence or loss of function of the thy-



Figure 1



Figure 2

that thyroglobulin is excreted by the mammary gland, with the milk in the human, the child receiving in this manner the necessary amount for its metabolism, it seems possible that one of the reasons why the human infant is so difficult to raise on artificial food is the absence of the necessary amount of thyroid secretion in the artificial food. As the calf is born with a functioning thyroid, cow's milk probably does not contain the amount of thyroid secretion necessary for the development of the infant. Parenthetically I wish to say in bottle-fed babies

roid gland occurring during the first year of postnatal life. Myxedema is the term applied where the function of the gland is lost during adult life. Infantilism is the term applied where the function is lost before puberty. The "Type Loraine" is the form which has only partial loss of function of the gland.

Between the normal conditions of the gland and the complete or partial cessation of functions there is a wide range of symptoms which are important to recognize if relief is to be found in thyroid feeding.

The etiology of sporadic cretinism is by no means definitely settled. A certain number of cases may be due to the morphological absence of the gland, but such must be very rare. It has been shown that syphilis and tuberculosis in the mother produce hypothyroidia in the child and it is probable that other diseases, as rheumatism, may have the same effect. Alcoholism in the parents, especially if one or both were under the influence at the time of coition, has been accused; all authorities quote about 15 per cent. of all cases to this cause. Consanguinity of the parents, impressions during pregnancy and prolonged labor have also been cited as causes, but are probably merely coincidences.

The infectious diseases in the mother which have been observed as associated with cretinism in the child are tuberculosis, erysipelas, acute articular rheumatism, malaria, and influenza, as they produce a pathological condition of the thyroid gland.

That the specific organism of these diseases should pass the healthy placenta and infect the fetus is improbable, but the toxins produced by them in the maternal circulation will certainly circulate in the fetus and possibly produce the disease of the gland. These conditions will account for a certain number of cases, but some other etiological cause must be invoked for the majority.

In physiological experiments it was found by removing two-thirds of the thyroid gland of a female dog and impregnating her by an unoperated dog she produced puppies with thyroid glands twelve times larger than normal. This experiment has been frequently repeated with the same results, showing that Nature compensated for the absence of thyroid secretion in the mother by stimulating the growth of the gland in the pups. It is probable that the reverse would occur —viz., that should the mother have an excess of thyroid secretion the gland in the young would not be developed and as a result the child would show certain cretinic symptoms after weaning, as up to that time it would receive a certain amount of the maternal thyroid secretion with the milk. In these cases the child would be a cretin, or, should the gland develop to a certain extent, the symptoms would decrease in proportion to the development of the gland. The occurrence of a cretinic condition without a goiter, when goiter is endemic, suggests that the parenchymatous increase of the maternal gland in conjunction with the normal hypersecretion of pregnancy, prevents the development of the fetal gland. The same reason will account for cases of sporadic cretinism; should the maternal gland

be hyperexcited during pregnancy from any cause, then the fetal gland would fail to develop. Virchow claimed that the mental deficiency in cretinism was due to premature ossification of the sphenobasilar bone, preventing the elongation of the base of the skull; others contend that the pressure of the goiter on the carotid arteries prevents a sufficient circulation from narrowing of the cranial foramina.

When cretinism is fully developed during intrauterine life, which is very rare, it usually results in death of the fetus, which displays a stunted conformation of body with redundant skin, thickened cranial bones and a general irregularity of development. Those who are unfortunately born alive present a remarkable picture of mental and physical deformity, being dwarfed monstrosities with negative intellects. Should they survive they develop into the lowest form of cretinism. As a rule, in both sporadic and endemic forms, there are no symptoms at birth, nor do they appear before the sixth or seventh month, the thyroid secretion being supplied from the mother's milk. About the time of weaning it is observed that the child is dull, there is want of proportion in the growth of limbs and trunk, the head being larger than the rest of the members. As the child ages these symptoms become more marked, the extremities become short and stumpy, the subcutaneous tissue thick and boggy, the forehead low, the base of the nose broad, the eyes wide apart and expressionless, half closed, with thickened lids and scanty brows, the lips thick and purple, the lower lip pendulous with the saliva running over it, the tongue swollen and protruding, the cheeks boggy, of a dirty icteroid hue. The teeth are sometimes absent or appear late, decay and fall out early. The spine is crooked, having a posterior curvature in the cervical region and a compensating anterior curvature in the lower dorsal and lumbar regions, causing the abdomen to protrude; there is also a lateral curvature. A pseudoumbilical hernia is generally present, but contains no gut; true inguinal hernia is not uncommon. The genitalia are usually small and poorly developed, often with various deformities; the testicles do not descend until late, sometimes not at all; the head of the clitoris is enlarged, protruding between the endematous labia majora; the arms are thick, short and puffy; the fingers thick; legs cylindrical and stumpy; the feet short, too wide for length, a bright pink. The hair of the head is coarse, harsh and scant. The physical development is arrested. Cretins of fifteen years may be no more than two feet six, or three feet high. The treat-

ment is supplying thyroid gland to the body; the results have been one of the brilliant achievements of modern medicine. Thyroid extract increases the heart action, increases the peripheral circulation, lowers the blood pressure, stimulates mental activity. And if given in too large doses it causes a loss in weight, also sleeplessness.

You have before you here a typical cretin, age fourteen years. This is the patient brought before this society in November last year by Dr. Rush. You who saw her at that time recall the edematous condition of the skin, though it did not pit on pressure. Her skin was bluish and mottled from poor peripheral circulation; note the great improvement in its clearness. Her height at that time was thirty-two inches, girth thirty-two inches. She has gained one inch in stature, being now thirty-three inches, and has lost ten inches in girth, being now twenty-two. But the greatest improvement is in her mentality, as you can all see. She can now talk and feeds herself. When the first negatives were made, 7 months ago, she was like an animal as to modesty. Mrs. Heagney reports when the last negatives were made the child felt a modest shame on being undressed, tried to cover herself with her hand, saying, "man see," "man see." The feet, that were at that time a bright pink, are now the normal size and color. She was put upon two grains of the pure gland three times a day, increased as she could bear it. A larger dose was poorly borne and she has been kept mostly on two grains of the desiccated gland, t.i.d. You will note the decrease in the size of the abdomen and that the pseudo-umbilical hernia has almost disappeared.

The mother of this child died with tuberculosis and the father was a drunkard. She has a brother and sister older than herself, both bright mentally.

Note the difference in the hair.

A MECHANICAL ASSISTANT FOR THE MORE CORRECT ADJUSTMENT OF COLLES' AND POTT'S FRACTURES.*

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The apparatus which I desire to present to you is merely a mechanical assistant, incapable of becoming tired, unsteady or nervous, whose sole function is to hold a patient's arm firmly in reduction during the process of applying and set-

ting a plaster-of-paris splint and securing it in place.

The average assistant, lay or professional, no matter how strong or intelligent, is unable to hold a broken arm steadily in reduction for more than five minutes; between the restlessness of the patient and a certain nervous strain on the part of the assistant there arises a continually varying tension which makes uncertain the reduction of the fragments, and impairs the integrity of the setting plaster. Plaster-of-paris will not set in less than five minutes; and in some atmospheric conditions thirty minutes are not enough. From this state of facts I was led to believe that some mechanical method of holding the broken arm might be desirable. This apparatus is the result of a number of experiments.

I do not consider the use of any other splint material than plaster-of-paris in dealing with Colles' fracture, because no other mode of dressing so fully meets and overcomes indications and difficulties peculiar to this most troublesome fracture.

That abomination, the ready-made splint, of whatsoever material, has had its day, and has wrought untold harm, because the patient's arm must of necessity be fitted to the splint; whence has come a plentiful crop of deformed wrists, impaired functions and damage suits without number. The classical board splints of the forefathers are less objectionable, because their use implies a more or less successful attempt at reposition and retention; but the straight or curved wooden splints are at best only a makeshift, liable to result in deformity and loss of function.

The round-and-round plaster splint, applied over a thick layer of cotton padding, while an assistant holds the arm in reduction, is too dangerous and uncertain to be considered. After the first layer of plaster bandage is applied, with varying tension, all landmarks are lost to sight, and there can be no certainty that the fragments are still in line; and even if, later, the splint be split and repadded, there is still a considerable degree of uncertainty.

For these reasons I long ago decided that for my use plaster-of-paris was best, combined with mosquito-bar, which has a very open mesh and allows the perfect penetration of the plaster.

A deep anterior splint, constructed as is to be shown presently, carefully molded over an exceedingly thin layer of cotton wadding to fit all curves and eminences, is, in my opinion, the most satisfactory dressing for Colles' fracture.

The mechanical assistant which I use very fully meets all indications. It is a wooden board, three-eighths of an inch thick, 26 inches long, hinged

* Read before the Eleventh Councilor District Medical Society, Oct. 21, 1909.

in the middle for convenience, tapering from 5½ inches to 4 inches. At the broader end is a leather collar, adjustable by a double cord reeved through holes in the margin of the board; at the narrow end is a capstan peg which winds up a strong cord, to the other end of which is a 2½-inch wooden toggle. The collar encircles the arm at the elbow, the back of the arm to the board. In most subjects the back of the arm forms a nearly straight line, but if the subject is muscular it is necessary to place a suitable pad under the elbow to bring the arm flat on the board. The toggle is now placed in the grasp of the first and middle fingers and secured by a strip of adhesive plaster passed around the clenched fingers, making their hold secure and not dependent on the will of the patient. The fracture having been previously reduced, the capstan peg is slowly turned until the tension is sufficient to maintain reduction. Cessation of acute pain is a fairly good sign that reduction is complete, and the patient will be content to recline indefinitely in an easy chair,

following traditional methods they have followed a false guide. Furthermore, I believe that we at this later day lay too much stress on the use of the *x-ray* as a diagnostic aid. If it were possible to submit all cases to it, no one could demand better aid. But how about those cases who are far away from such aid? It seems to me that the surgeon who deals with fractures would do well to acquaint himself thoroughly with the anatomy and landmarks of the wrist, so that he may be reasonably sure that the disorganized joint is in its natural position when the splint is applied.

There is such a wide diversity in the length, taper, size and conformation of the forearm, such wide differences in the shape of hands and wrists, that I cannot by any stretch of imagination conceive the possibility of keeping on hand, much less carrying about from place to place, a complete set of ready-made splints which shall fit all possible cases. Each arm is in a class by itself, and the delicate, complicated mechanism of the wrist



Figure 1

the arm outstretched and resting on a support. This position leaves the arm between supination and pronation, and easily accessible for the rest of the work.

The application of the splint is next in order, and because the fracture is mechanically held in reduction, there is no need of haste. At this point if an *x-ray* is available, it is good policy to learn if the adjustment is as good as it seems; but, unfortunately, this is not always the case, and the surgeon who is not the "man of his hands" that his name implies should make haste to educate his fingers. The ancient art of bone-setting does not come by nature, and he who thinks that the title of M.D. necessarily brings proficiency may have cause to regret the assumption. According to the best information I have been able to secure, at least 50 per cent. of all surgical damage cases have their origin in cases of Colles' fracture. It is a safe inference that the profession as a whole has hitherto been singularly inept or careless in the management of Colles' fracture, or that in

does not lend itself readily to hap-hazard adjustment.

Since Colles' fracture is very common, always have ready a telescope bag containing all the supplies likely to be needed. The telescope is usually provided as follows:

One Colles' fracture adjuster.

Fifty pieces mosquito bar, 10 x 14 inches.

Four pounds fine dental plaster in 1 pound paper bags.

One 10-yard roll Z. O. plaster, 1 inch.

One 10-yard roll Z. O. plaster, 3 inch.

Two pieces of glazed cotton wadding, white.

One 2-inch shoe knife, square point.

One tape measure, paper.

One pair scissors.

Eight to twelve layers of mosquito bar are immersed in plaster cream and rubbed full. From the blank thus formed the splint must be quickly cut, according to predetermined measurements. The width of the splint at each point should be two-thirds the circumference of the arm; the

length, from the middle of the palm to a point 1 inch anterior to the bend of the elbow. The shaping is done with the small shoe knife, and must be rapid, else the plaster may set unexpectedly. A semicircular notch is cut to accommodate the thumb. The blank thus formed is lined with a half layer of cotton wadding, applied immediately to the anterior aspect of the arm, and carefully rubbed till it fits closely. Great care must be taken to see that the margin of the splint

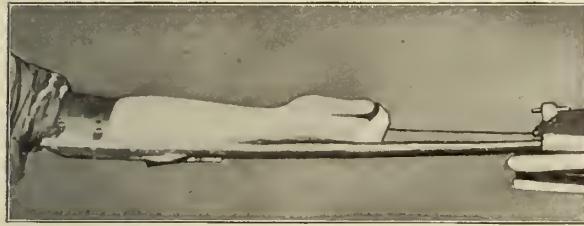


Figure 2

fully reaches the level of the styloid, for its support, and it is also well to increase the thickness of the splint at this point for stronger support. To still further increase the firmness of the splint, I always apply a longitudinal keel of bar and plaster from the palm half way up the arm. This is far better than any tin strip or other device for the purpose of stiffening the splint.

When fully set the splint is removed from the arm, dried, trimmed and relined with a fresh half layer of cotton wadding.

The final adjustment of the splint, no less than its formation, is a matter calling for close attention to details. Since its action and efficiency depend not upon pads and compression, but upon accurate fit and proper extension to prevent displacement, the first thing to look after is the extending force. This is a 2-inch strip of adhesive plaster applied along the anterior aspect of the forearm, from just above the site of fracture to a point three inches above the upper end of the splint. With the adjuster still in position, the first retaining strip is applied about the palm of the hand and firmly secured. Then the extension strip is turned down to the splint and secured to the splint with a short strip of adhesive plaster. Then follow the middle and upper strips, after which the adjuster is removed. Where the retaining strips cross the arm I usually apply a piece of padded pasteboard or a back splint of mosquito bar and plaster. A Colles' fracture so dressed has little or no chance of getting out of position, is not liable to strangulation, and seldom gives pain after the first day.

The ulnar styloid may be kept fairly well in position by a strip of adhesive plaster, the use of which is advisable during the application of the splint; but its main support comes from the reinforced margin of the splint itself. The tendency of the ordinary type of splint is still further to displace the styloid. With a plaster splint constructed as shown, it is possible to keep the styloid in correct position, and at least give it a chance to maintain its proper relation to the joint.

The adjusting splint is merely a means to an end. It is not automatic, nor is it fool-proof. If a surgeon uses it with reasonable intelligence, realizing its limitations, it will be an aid in getting the best results possible in that neglected and misunderstood fracture. It is far more efficient than a human assistant, lay or professional.

It may be objected that this is very elaborate and fussy, and that no busy surgeon can take the time and trouble to make a splint in this manner. The only answer I can make to this objection is that it is easier than to defend a damage suit, even with the backing of a casualty company. The efficiency of the wrist joint has such a bearing on a man's capacity as a bread winner that we owe it to our patients to give them every possible chance for restoration to functional perfection. The older method of forcing the wrist joint back to place with pads and compression never did appeal to me as even approximately correct or desirable. The principle of maintained extension, which causes the dislocated fragments to fall into line is totally lacking in the older methods. Such a complex mechanism as the



Figure 3

wrist joint deserves better handling than it has hitherto received at the hands of the profession. I believe that the method which I have here set forth will give others, as it has given me, results satisfactory to both surgeon and patient, and in addition prevent much litigation.

This same method is applicable to the adjustment of Potts' fracture, for which purpose a special modification of the apparatus is necessary.

It allows the application of a splint with great fixative and extension power, and keeps the broken ankle under perfect control during the application of the splint. Like the Colles' apparatus, it is merely a mechanical assistant, and is not in any sense automatic nor fool-proof.

THE APPENDOTOME.

A NEW INSTRUMENT DEVISED FOR REMOVAL OF THE APPENDIX.

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VALPARAISO, IND.

Speed, accuracy and cleanliness are refinements in operative surgery which make for success. I have devised an instrument for use in appendectomy which I think possesses merit along these

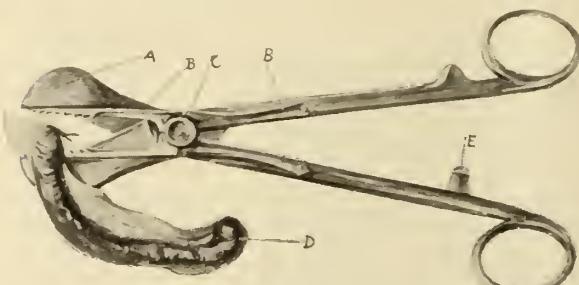


Fig. 1.—Showing superior surface. A, blade of scissors; b, clamp; c, lock-nut, the removal of which permits instrument to be taken apart and cleaned; d, appendix, in position to be clamped and cut; e, ratchet, by which instrument locks automatically.

lines. I call it the appendotome. The instrument is a combination of clamp and scissors. Its use is well demonstrated in the accompanying illustrations. It possesses the following meritorious features:

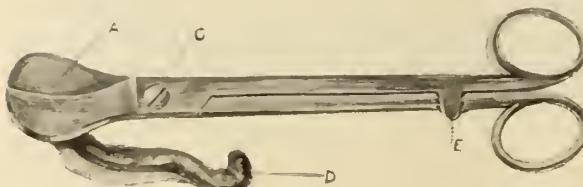


Fig. 2.—Showing inferior surface. A, blade of scissors; c, pin, which holds lock-nut on opposite side; d, appendix, clamped and cut, showing how cut end is completely sealed by scissor blades; e, ratchet, which locks instrument automatically.

1. After ligation, it clamps, cuts, seals and removes the appendix at one stroke.
2. This is all done with one hand, leaving the other free.
3. It saves time.

4. It prevents leakage from the proximal cut end of the appendix.

5. It locks, automatically, and is removed from the field attached to the severed appendix, thus precluding subsequent use of the instrument in some other part of the operation—a mistake which is possible by other methods.

The instrument is simple, easily and quickly taken apart when cleaned, and therefore aseptic. I first used it in an operation at the Frances E. Willard Hospital March 6, 1909, and have since employed it continuously in my work with entire satisfaction.

ACUTE ENDOCARDITIS.*

W. A. FANKBONER, M.D.

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Our professional work presents to us, in almost every sick person treated, a study in complexities. No organ or tissue of the body becomes diseased without, in a greater or less degree, affecting adjacent or distant organs or tissues. This is especially true in septic and infectious diseases, and with such diseases one of the things that may develop is an infection of the endocardium.

The endocardium is a structure continuous with the lining of the blood vessels opening into the heart. It is composed of two layers—a thin fibrous layer and an endothelial layer. The latter is composed of a single layer of flattened endothelial cells. The endocardium derives its nutriment from the direct blood stream. It has no intrinsic blood vessels except a very few at the bases of the mitral and tricuspid valves. The valves contain no muscular tissue, but are given strength and thickness by an increased amount of the fibrous layer.

Endocarditis is not a primary disease. It is a part or a complication of some other affection. It is due to a bacterial invasion of the endocardium. The bacteria causing the lesion are, either directly or indirectly, those of the primary disease; but other bacteria are likely to be associated in the pathological process. There have been found in the diseased endocardial areas the diplococcus pneumoniae, the Klebs-Loeffler bacillus, gonococci, staphylo- and streptococci and some others of the more common kind, and still others of a less common kind that are said to bear a specific relation to the endocardial inflammation.

The valves are most often affected, but any part of the endocardium may be the seat of the disease. Even the chordæ tendinae, papillary muscles

* Read before the Eleventh Councilor District Medical Society, Oct. 21, 1909.

and myocardium are in some cases attacked. The left side of the heart is more often affected than the right, and the mitral valves more often than the aortic.

A rational classification of our cases would be desirable for the purpose of study and description, and as a help to the better management and treatment, but this is a difficult matter.

We cannot classify on a bacteriological basis, because the bacteria present in different cases do not give rise to definite distinguishing clinical manifestations, nor do they cause distinctive courses or terminations of the disease. In the study of the changes that take place on the endocardium we do not get a harmonious interpretation of what we may see at the bedside, because in some cases the symptoms may be violent and death ensue without apparent commensurate tissue changes showing at post-mortem, and in other cases, with slight signs, there are extensive lesions. Neither are the symptoms reliable as a basis, because of their great variation. We speak of simple or benign and malignant or ulcerative as probably offering the best working basis, but these are often only different stages of the same pathological process. Each case must be studied individually on the broad basis of the general clinical manifestations.

Endocarditis is especially likely to occur with rheumatism and about one-third of rheumatic cases develop this complication. With chorea, also, it sometimes occurs. The relation of endocarditis to rheumatism is not so nicely explained as is its relation to some other primary diseases, but if rheumatism is a septic condition then the bacterial cause is operative.

In general and localized septic conditions, such as erysipelas, puerperal septicemia and abscess, and in pneumonia and some other diseases there is an infective agent that can initiate the endocardial inflammation, and such cases are usually of severe type.

In certain other diseases, such as tuberculosis, cancer, etc., there occurs a condition of great debility which predisposes to secondary infection, and a complicating endocarditis is usually from bacteria not common to the constitutional disease.

Gonococci may become localized on the endocardium, but this infection is most likely to occur on valves that have been previously diseased. The inflammation is usually of a severe type with well-marked symptoms and severe lesions.

It cannot always be demonstrated that the bacteria of the primary disease become localized in the heart. Post-mortem findings may show their

absence and the presence of others, or all bacteria may be absent. The vitality of bacteria in the body is sometimes limited and they may have disappeared, but the evidence of bacterial activity is shown by the lesions on the endocardium.

Infection may occur in two ways, from the blood stream as it passes through the chambers of the heart and from the coronary circulation proper. It usually occurs from the direct blood stream.

The aortic and pulmonary valves have no intrinsic vessels and can, therefore, become infected only from the direct stream. The same is almost entirely true of the mitral and tricuspid, they having very few intrinsic vessels and only at the base adjacent to the heart muscle. The mural endocardium may become affected through the coronary circulation, because it is in more intimate relation with the intrinsic vessels of the heart.

The presence of bacteria is not sufficient cause for an endocarditis. Undernutrition and mechanical injury are predisposing factors. The heart suffers from undernutrition as do other parts of the body; and there are certain features connected with the normal mechanics of the heart and the impact of the blood stream on the endocardium that predispose to mechanical injury. At the point of contact of the valves is the place where the greatest mechanical pressure occurs, and this is the favorite location of the disease. Aside from the injury that may occur from this normal mechanical pressure, there may reach the heart in the blood stream particles of thrombi or other septic material, and these, by becoming pinched in the line of valve contact, may inflict such injury as would favor bacterial localization. The surface of the valve next to the blood current which receives the impact of the blood stream is more often affected than the opposite side; and the anterior flap of the mitral valve is more often affected than the posterior flap, because its greater tension subjects it to greater friction from the blood stream. All the valvular orifices being naturally narrower parts of the heart are subjected to this greater blood friction and are more prone than some other parts to inflammation.

The blood stream friction idea explains theoretically at least why in intrauterine life it is the right side of the heart that is affected. In intrauterine life it is the right side of the heart that is doing the greater work, while in extrauterine life the opposite is true.

Artificial endocarditis has been produced by passing a sound down the carotid and passing the end of the sound over the valve leaflets and then injecting pathogenic bacteria into the circulation.

These experimental inflammations are more severe than are seen in ordinary cases of endocarditis, but they emphasize the fact that bacteria will attack a valve at its point of injury.

The theory has been advanced that the toxins of the primary disease so affect the endocardium that the blood pressure will force bacteria into the endothelial layer and in this way, without a local injury, cause infection.

An increased intracardiae pressure, such as would arise from aortic stenosis or a hypoplastic condition of the blood vessels, does favor the occurrence of endocarditis. Such increased intracardiac pressure gives affirmative argument to both ideas of causation—increased blood friction, and increased pressure to force bacteria into the endothelium.

Recurrences are likely and are caused by a new localized infection from an old distant focus or from an entirely new distant focus; or the bacteria in the old diseased areas of the endocardium may remain latent, *in loco*, and under favorable conditions give rise to a recurrence. Their presence has been demonstrated in old cicatricial tissue in cases in which there was no active inflammation. Recurrence is usually more severe than the initial attack.

The changes on the endocardium are various as to character and extent, but all are only different stages or phases of the same pathological process. There may be present a single small mass on a valve, or a perforation of a valve leaflet, or the destruction of a valve segment; or, as in unusual cases, an ulceration of the mural endocardium with perforation of the heart.

In the simpler cases there are present along and near the margin of the valve or over its surface few or many masses or vegetations of pinhead to bean size; gelatinous or firmer in consistency; whitish to red in color; broad sessile or pedunculated at the base and isolated or coalescent as to arrangement. These masses are capped with a fibrinous thrombotic material which gives them a warty or cauliflower-like appearance. The macroscopic evidences of disease are confined to the mass or vegetation. The general endocardium, even adjacent to the mass, presents a healthy appearance.

In other cases, probably from a greater virulence of the infection, there occurs the more profound lesion of ulceration and destruction of tissue. These ulcers are areas covered sometimes with yellowish or reddish thrombotic masses; or they may be open with bottom and edges granulating. The ulceration may be of a superficial type, or it may extend to the degree of great tissue

destruction and be productive of various adhesions and deformities.

The incipient lesion in endocarditis is an opacity. A spot on which, by tissue proliferation, there may occur a vegetation; or, by tissue destruction, an ulcer. In the pathologic process of infection there occurs necrosis, infiltration and tissue proliferation. When the necrotic area loses its integrity the eroded surface is soon covered by a fibrinous thrombotic mass, which serves as a protective shield. Through tissue proliferation granulations are built up, the thrombotic covering disappears and the surface is covered with endothelium. In the healing process fibrous tissue is produced in excess of the normal amount and there results an induration and thickening. The valves of the heart may be so unyielding from these fibroid changes, or may show such deformity from tissue destruction and cicatricial contractions that their function is most seriously impaired. In some cases the destructive process is so rapid and may go to such an extent that the crippling of the heart is immediate and so severe that it cannot do the work necessary to sustain life and an early fatal issue occurs.

Other pathologic conditions associated with endocarditis are those due to the primary disease and to emboli carried from the heart to distant parts. Embolism is most likely to occur in the spleen, kidney and brain, and may result in infarcts or abscess, depending on whether or not the embolus is septic.

The clinical features are variable. Their character depends upon the general effects of the primary disease, the intrinsic heart conditions and the complications with other organs. Either one of these cases may give rise to the predominating symptoms.

The general constitutional symptoms of the primary disease may be so pronounced that those of the endocarditis would be of secondary importance. Or, with a less virulent general infection, the heart disturbance might assume a more serious relation to the illness and its symptoms be the predominant feature. The manifestations arising out of embolism from the heart to other organs may give the case an entirely different aspect.

The onset is usually slow and the clinical picture of the general illness may not be materially changed by the endocarditis. In the milder cases the patient may not have many well-defined subjective symptoms. He will likely have an unusual consciousness of his heart action and will feel that he does not get enough air, and yet will not show any labored breathing. These are fairly constant

symptoms from a diagnostic point of view. Pre-cordial distress and a sense of oppression may occur.

The heart signs will not be strongly marked. The sounds may not be appreciably affected. There will be some irregularity and rapidity of the pulse and some deficiency of heart force. The case may go on without at any time during the acute stage anything of an especially serious nature manifesting itself; but, at a later time, and perhaps not for weeks or months later, the heart sounds will give positive evidence of the damage that was wrought.

Such a favorable course is not followed by some cases. The attack may come on with violent symptoms: all the manifestations of a profound infection, a weakened myocardium, serious endocardial lesions and intensified heart manifestations. The heart sounds are at first muffled, but soon develop inconstant murmurs, which at a later time become more clearly defined.

The symptoms of endocarditis are so subject to variation, and the pathologic findings are sometimes so much out of harmony with the clinical manifestations, that a paper description of the disease cannot approach a reasonable completeness, and must be subject to many additions and modifications. The disease is so interwoven with the primary disease that it is at times difficult to determine what of the clinical picture is strictly from the endocarditis and what from the primary disease. After a time, however, the heart manifestations become more definite in character and their interpretation is an easier matter.

We should study the heart in anticipation of an endocarditis, while the heart may yet be in a condition free from disease. The knowledge so gained will be of great assistance in detecting the first indications of trouble. In this way we may be able to know also how much, if any, of the heart disturbance comes from psychic and mental influences and from gastric and other nervous reflexes.

An inspection is likely to reveal some degree of cyanosis and possibly the evidence of excited heart action. The pulse rate may show an unusual acceleration on slight exertion. Later there develops the muffled valve sound, which, though not yet showing evidence of a definite nature, will finally give way to murmurs; there is a greater effort on the part of the heart to do its work and an increased and more tumultuous action.

In general septic conditions the heart muscle becomes debilitated, and is accordingly weakened and its functions is in such degree impaired. This general impression on the heart becomes an even more serious consideration when endocarditis

occurs, because in its harder-worked state it has less intervals of recuperation. This impaired muscular tone contributes also to the disturbed heart action, and may even be a factor in imperfect closure of the valves and simulate a true valvular lesion.

Percussion gives us little if anything of value in early diagnosis. Enlargement of the heart dulness laterally may be elicited, but this does not occur early in the disease. Dilatation may occur fairly early, but it cannot occur to the degree that percussion will reveal until a valvular lesion has been present long enough to cause it. However, in cases where there is a myocarditis, the dilatation may come on early and rapidly. In some cases the heart action is apparently vigorous (but not so in reality), and the pulse is weak. It is this disproportion between the heart's action and the pulse that suggests dilatation in the early stage, rather than the evidences on percussion.

The most important thing in endocarditis is its prevention if possible, and next to this a careful study and interpretation of all we can know of its early signs and symptoms.

There are some special things connected with the heart proper that have to do with prognosis. The mitral valve is the part affected in a majority of cases: and unless the inflammation is of a very severe type, the patient is left with an incompetency that is not inconsistent with reasonable well-being. If the aortic valves are the seat of disease and become incompetent, the more serious condition of left ventricular dilatation occurs. A concurrent myocarditis favors dilatation from the greater weakness of the heart muscle; and if myocarditis occurs with disease of the aortic valves the ventricular dilatation may be rapid in development, and may be a factor in an early fatal issue. Embolism to distant organs, whether producing non-septic infarcts or localized septic conditions, adds to the gravity of the outlook.

The prognosis in most cases depends largely upon the effects of the primary disease. The toxic condition of the system, the depleted nutritive quality of the blood and the disturbances of nutritional processes all bear a fundamental relation to recovery. The participation of the heart in the outcome of the illness may be of a major or a minor importance. The primary disease may be of such violent type as to overwhelm the system by sepsis and the heart lesion be wholly a matter of secondary importance. Or if the initial septic condition be of such type that recovery from it seems assured, then the heart becomes the more serious consideration. As a rule, however, the greater the heart disturbance the more serious the

outlook, and yet some cases with the evidences of a serious lesion will apparently recover and others of a milder type take on an unwarranted serious aspect.

A cure of this disease is possible in mild cases. Nature may remove the altered tissue and leave the valve in good working condition; but this is not likely to occur, and the proof of it would be well nigh impossible. Recovery from acute endocarditis occurs in most cases, if by recovery we mean that the patient passes through the acute stage and is able to be about. However, there is left on the endocardium the permanent imprint of the disease, possibly unchanging, but more likely slowly active or latent. The valves are in some degree permanently injured, and in that degree cannot properly do their work. Even though the affected parts heal, they are left as areas which are thickened, hardened, roughened, and which through later fibroid changes and contractions may become variously deformed. On such healed areas recurrences are likely, and an acute attack engrafted upon such a field is usually severe and of the ulcerative type.

The severe cases may prove rapidly fatal. The more ordinary milder cases may run a course of months or even years with somewhat constant or varying manifestations. The patient may be able to pursue his ordinary occupation and enjoy ordinary good health with a heart not able to do its work up to the normal standard; but he has a weak heart, and his trouble, barring a recurrence, will be based on his heart weakness.

A study of the etiology, pathology and clinical features of this disease brings us to the conclusion that in treatment it is the primary general condition that demands our most careful consideration and management. This treatment should be directed not only to the general disease, but toward the prevention of an endocardial inflammation. We can not have satisfactory assurance that what we do toward prevention is effective, but it is a rational effort and should be kept in mind.

If endocarditis is threatened or present, the patient should be in bed, even if his general illness has not already put him there. We should be especially solicitous to see that such things are done as will be conducive to quiet heart action. The nurse should be not only skilled, but one whose personality is agreeable to the patient, and there should be an absence of all things in the sick room whose influence is distractive to mind or body. I think it a good plan to explain the condition plainly to the patient and give him all the brightness there is in the outlook. His resignation and cooperation on such a basis will be helpful.

The drng treatment of the heart condition should be very limited. The heart is working hard to do its duty. It should not be whipped to greater exertion. Perhaps strychnia in small doses is most useful. Anodynes and nerve sedatives should be used as needed. Digitalis is harmful. The heart will be slowed, and the interval of rest which occurs just previous to systole will be lengthened; but the ventricular contraction is more forceful and the blood stream is driven with greater violence against the already injured valve. Sedatives, such as aconite or veratrum, are harmful. Under their influence the myocardium is depressed, the heart will not be so well emptied and dilatation will be favored, especially if a myocarditis be present. At critical times we may resort to such remedies as ammonia and brandy. The ice-bag will be found useful unless the circulation is feeble, and then heat is preferable.

The nutrition of the body should be supported by a selected diet, taken in as liberal an amount as the patient is able to digest. Rest in bed should be continued until getting up or moving about does not cause a persistent change in the heart's action.

The general treatment is, of course, that of the disease to which the endocarditis is secondary. Along this line the development of serum therapy may give us something of a more specific nature.

STATUS LYMPHATICUS.

AARON KERN, M.D.

WABASH, IND.

Definition.—A so-called constitutional disorder characterized by a persistence or hyperplasia of the thymus, and by generally lymphadenoid hyperplasia; frequently associated with cardiac and arterial hypoplasia and the osseous evidence of rachitis.

History.—The term lymphatic diathesis is an old one in medical literature, and was no doubt applied to certain cases of status lymphaticus, as previously defined. Inasmuch, however, as scrofulous or tubercular adenitis was particularly indicated by this ancient term, and that it was also applied to cases of pseudo-leukemia, chlorosis and leukemia, it is impossible to determine in how far it was definitely employed. The most prominent anomaly of status lymphaticus, the persistent or enlarged thymus, was recognized by early pathologic anatomists like Felix Plater in 1614, Richa in 1723 and others. A clear conception of the lymphatic state was possessed by that pathologic anatomist of wide and fruitful experience, Carl Rokitansky, who, in his text-book in

1842, observed that the hypertrophy of the lymph glands occurs in childhood to puberty or even beyond to mature life. A. Paltanf of the Vienna School awakened interest in the lymphatic state in 1889.

Morbid Anatomy.—It is observed that pharyngeal, thoracic and abdominal lymph glands are most frequently affected, the cervical, axillary and inguinal less so, although they may show slight enlargement. There is usually much enlargement of the lymphatic structures of the alimentary tract, the tonsils, adenoids of the pharyngeal vault, and the solitary and agminated follicles of the small and large intestines. The hyperplasia of the lymphatic structures may be most remarkable, the individual glands standing out like peas. The enlargement of the spleen is usually moderate. The Malpighian bodies may be very prominent, and when anemic may resemble large tubercles. The spleen is usually soft and hyperemic. The thymus is enlarged, swelled and soft, and may exude a milky white fluid; it may measure as much as 10 centimeters in length. The bone marrow is in a condition of hyperplasia, and the yellow marrow of the long bones in young adults, and even in persons between the ages of 20 and 30, has been replaced by red marrow hypoplasia of the heart and aorta, hypertrophy of the thyroid gland, and, in a large number of cases, in children, rachitis are associated with this condition. The skin is thick and an increased fat layer has been noted. The pallor of the skin is peculiar and known as pasty and considered an evidence of lymphatism.

Clinical Manifestations.—Status lymphaticus has been found in a number of diseases in which the association seems to have been more than a mere coincidence.

Thymic Asthma.—Or that peculiar spasmodyne known as spasm of glottis, laryngismus stridulus or child-crowing, has been looked upon as having its anatomic basis in a hypertrophy of the thymus gland. It is a disease of infancy and may be defined as a paroxysmal suffocation, and is not an uncommon cause of sudden death, especially between the fourth and tenth months. In a typical fatal attack, the child suddenly jerks its head backward with a sharp noisy inspiration like that of a whooping cough, but sharper and shallower, the eyes are upturned, fixed and pupils dilated, the face has a painful, anxious expression; is blue at first, then pallid, the nostrils are dilated, the tongue swells and arches backward against the hard palate, while the veins of the neck become engorged and stand out prominently. The arms assume a condition of tonic extension, with fists and thumbs turned into palms, the legs become extended, great toes abducted and dorsally flexed. An attitude of opisthotonus is assumed

by the spine. A convulsive tremor of the facial muscles and an ineffectual gasping inspiratory attempt follow. Suddenly the spasm ceases, the face becomes ashy, then cyanotic, the tongue and lips are livid, and after one or two minutes the child is a corpse. Urine and feces are passed involuntarily if artificial respiration is attempted. The heart ceases its activity at the outset of the paroxysm, its sounds are inaudible and the pulse is absent. As to the etiology of thymic asthma and thymic sudden death, the theory is that the weight of the enlarged thymus on the heart, lungs and large vessels induced the spasms of the glottis either by direct pressure or by irritation of the recurrent laryngeal nerve.

Infantile Eclampsia.—The relationship of infantile eclampsia and status lymphaticus has not been emphasized, but there is reason for believing that this convulsive neurosis, like glottis spasm, occurs in lymphatic children, as from several autopsies made of children dying of convulsions, the thymus gland was enlarged, with pronounced hyperplasia of the intestinal and splenic follicles and hypertrophy of the mesenteric glands.

Idiopathic Tetany of Infancy.—Closely allied to spasm of the glottis and eclampsia is the carpopedal spasm of infancy, which is classed as infantile idiopathic tetany. Escherich affirms that the lymphatic state may exist as a complication of tetany, and is of a very grave import.

Epilepsy.—A mention of persistent thymus in epilepsy was made in 1896 by Krause and Cahen, based on autopsies. Epileptics are very prone to sudden and often tragic deaths, as by asphyxia, syncope, heart failure without anatomic cardiac lesions, rapid status lymphaticus, edema of the lungs, cramps and drowning, and it has been endeavored to define an affinity between the sudden death in epilepsy and that seen in such neuroses as thymic asthma, the various forms of thymic sudden death of infancy, and those in adults presently to be described.

Death in Surgical Narcosis.—Gradually, but more particularly since the report upon Kunhardt's observations, we are coming to learn that status lymphaticus is to be held responsible for most of the deaths in chloroform anesthesia and probably for many of those occurring in surgical narcosis by the use of other agents, like ether, nitrous oxid, etc. It is very hard to make a diagnosis of status lymphaticus during life, and especially in adults, but in children, if there is an existence of adenoids, enlarged tonsils, enlarged superficial lymph nodes and osseous rickety changes, together with a history showing eclampsia, laryngismus stridulus or idiopathic tetany, changes, together with a history showing eclampsia, laryngismus stridulus or idiopathic tetany,

it should be seriously considered as having grave prognostic importance. All subjects of a status lymphaticus have a very low resistance to infection, and always a guarded prognosis in cases of diphtheria, typhoid pneumonia and anemia.

Diagnosis.—Paltanf distinguishes two varieties of status lymphaticus, one rachitic and the other non-rachitic. In the first group a pale skin, well-developed fat layer, enlarged spleen and thymus, with lymph glands and follicles in varying grades of enlargement, and the epiphyseal changes of rickets are prominent. While in the second group, the pale skin, rich fat layer and pronounced hyperplasia of the lymph glands and follicles with a thymus above the average, are encountered; as a rule both groups seem well nourished.

Etiology.—As yet it is very obscure, but the majority of writers claim that on account of its close association with rachitis, and that rachitis is the result of microbial infection, not necessarily due to a single bacterial species, but to one of the several pyogenic organisms which act slowly, and which elaborate poisonous products capable of producing osseous or other alterations found in the disease.

Treatment.—Recalling the intimate association of status lymphaticus and rickets, treatment, particularly in its prophylactic phase, is clearly indicated. Measures which are efficient in the prevention or treatment of rachitis are on the same grounds destined favorable to influence the lymphatic state, and incidentally to control those disorders which result from these constitutional dyserasias. Mendar has had good results from external thymus gland. Also remove adenoids and enlarged tonsils when present and the dietetic and hygienic measures advised for the prevention of rickets.

ILIOHYPogaSTRIC HYPERESTHESIA.

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Modern surgery is conservative in its tendencies, its purpose is commonly life saving, and it offers much in the way of relief to those who suffer from disease and accident. With the development in improved technic and more certain diagnosis, fewer mistakes are made and the mortality following surgical procedures is being reduced to the minimum.

Those of us whose training has been sufficiently recent to elude some of the causes of failure in our predecessors have much to be thankful for, and even yet we must acknowledge that it has been mistakes that have taught us most. With state

laboratories for the examination of suspected specimens that may demand pathologic, bacteriologic, chemical and other microscopic tests, we are able to command the opinion of experts who give us reports that make our work little less than perfect.

In one line, however, we have allowed our domain to be invaded, and instead of accepting facts as we should, have denied too long the possible relation between functional disorders and a mental state, the result of no worse a condition than a lack of proper knowledge of how to keep well. While we are the means of relieving suffering humanity, Nature alone can cure, and only too often, in spite of our willing assistance, the allotted time of the individual is shortened. Our surgical experience is ripened by every case, and yet frequently results have not been all that were hoped for because of unexpected complications.

In no class of patients does the surgeon find so many contradictory results and so much wasted effort as in treating the pelvic complaints of women. Each decade had brought forth new procedures with worthy enthusiasts for their advocates, varying from galvanism to castration.

Among my families are a number of good women who are living lives that are scarce more than an effort for existence, because of the misguided advice that led them to permit themselves to be needlessly mutilated. A further experience having to do with a number of younger and unmarried women gives me occasion to consider the following facts most seriously:

Certain nerves, because of some peculiarity in their location, exposure or function, are susceptible to irritation and predisposed to a condition that from lack of greater knowledge we term neuralgia. Of the cranial nerves the fifth is the one most frequently involved; of the brachial plexus the musculo spiral; in the sacral plexus the great sciatic. Neuralgia of all the above nerves has been most exhaustively studied and treatment of various kinds has been devised and advised, but nothing, however, that I have read mentions the facts that the lumbar plexus might also have a nerve peculiarly liable to manifest the results of irritation.

The removal of the teeth in inferior dental neuralgia does not cure the disease. Temporary relief may have been obtained, but recurrence is the rule. Excision of the sciatic has not been advised or practiced, but it has been examined in open incision often enough so that definite pathologic conditions have been recognized. Anemia, hyperemia, chronic passive congestion and hyperplasia of the connective tissue elements of the sheath and the inter-fascicular bundles, with pressure symptoms, have been found at divers times.

The lumbar plexus we know is formed by a communication of the branches of the four upper lumbar with a branch from the last dorsal nerve. This branch from the last dorsal joining onto the greater portion of the anterior root of the first lumbar, which branch thus formed dividing into two parts, one becomes a part of the genito-crural nerve and the other dividing becomes the iliohypogastric and ilioinguinal. Passing from its point of origin a little to the outer side of the upper part of the psoas muscle we observe the iliohypogastric crosses obliquely in front of the quadratus lumborum to the crest of the ilium and there passes through the transversalis muscle, dividing into two other portions, an iliac branch passing through the internal and external oblique supplying the skin of the gluteal region. The hypogastric branch continuing down between the internal oblique and transversalis muscle, then pierces the internal oblique, and at a point midway between the anterior superior spine and the linea alba perforates the external oblique an inch above and a little to the outer side of the external abdominal ring, supplying the skin of the hypogastric region. In short, the nerve supplies the triangle from Poupart's ligament to the middle of the abdomen up to the level of the anterior superior spine. The ilioinguinal nerve passes down along the same course as the iliohypogastric, but below that, passing out through the inguinal ring to the skin in the upper part of the thigh and to the scrotum in the male and the labium in the female.

Quoting directly from Gray, he says: "The nerves supplying the abdominal muscles and skin are intimately connected with the sympathetic supplying the abdominal viscera." The origin of this nerve corresponds to a point opposite the hilum of the kidney. Bearing the above fundamental points in mind, we have it, then, that the iliohypogastric and the ilioinguinal nerves are directly in contact, by position and sympathetic anastomosis, with the entire urogenital tract. In addition to this, on the right side we have the appendix slightly above the point of emergence of the nerves, but yet sufficiently close that pain may be mistaken one for the other.

Case histories are abominable, while statistics are too often nothing but alphabetical rearrangements to suit the purpose and results of the compiler. Our patients come to us with divers diagnoses, ovarian neuralgia, ovarian congestion, ovarian inflammation, and what not; so long as the pain is in the hypogastrium the ovaries are accused of some fault or defect.

Sometimes the appendix has been blamed, and on its removal found by the pathologist to show no signs of infection. Sometimes a curettement

was done or a kidney fastened up with possible temporary relief, yet our patients' convalescence and return home has not given them the health and happiness they expected, and they later become the satisfied patronesses of some cult which many times does for them that which we could have done quicker and better, and which we should have done.

In the majority of these cases we find one of three conditions: First, tissue relaxation and visceral ptoses; second, diminished blood pressure and vascular impoverishment; third, hypersensitive urogenital tract. All of these may be associated. Customarily, there are two types—middle-aged neurasthenic and the adolescent hyperemic. Two of the disadvantages of our present civilization are too much education at the expense of physical development and the unfortunate economic conditions making marriage a financial consideration rather than a physiologic process. Ashton says: "Hyperemia of the ovaries is only met in young girls at puberty, in whom but little time has been given to devote to the development of their physique." It would be a great injustice to many virtuous girls to tell them that Decameron of Boccaccio would cure their ills; nevertheless, Nature intended every woman to be a mother, and she that is not is not as Nature intended.

The situation I want particularly to describe is the misinterpretation of cause and effect. The treatment of results and the failure to relieve the great cause of the disability. The pelvic triangle, bounded by the anterior superior spine of the ilium, the umbilicus and the pubic spine, has given the surgeon enough work without making it responsible for other than actual organic pathologic conditions.

The factor in these cases most often overlooked is that of a movable kidney, but a floating kidney is present in 80 per cent. of the women who frequent a doctor's office. It is merely an index of the tissue relaxation that is part of some general weakness, and rarely do we find it to be the cause of the hypotonic condition. While the kidney is not in the pelvic area, its malposition drags upon the lumbar nerves and the pain is referred to the back and to the pelvic area supplied by the iliohypogastric.

The most good that the average patient receives from kidney fixation is derived from the enforced rest that is part of the after-treatment. Should the patient be allowed to resume her former vocation without specific instructions as to getting herself into first-class physical condition so far as her entire body is concerned, she returns in a few months with the kidney down, or giving her as great pain from its new relation to the lumbar plexus.

Unless the kidney is the only organ that shows any ptosis and the patient has a normal blood pressure and is otherwise perfect, the surgeon should hesitate before sewing them up, for the kidney goes back into its place when the rest of the visceral tissues return to their normal tone. This may require a year or two of care and attention to physical culture and development, yet it is much better to promise something which is attained and becomes permanent in two years than to get temporary relief and later a disappointment.

I have found in young women especially the association of renal ptoses and pain in the ovarian region. In the majority of these cases the girl has drugged and doctored for years. Some of them have had local treatments and most of them expect a surgical operation to be the only thing that will cure them. These cases certainly try the soul of the physician who fails to recognize the condition and misinterprets the aches and pains as evidence of local disease without finding signs or symptoms to prove its presence. In but a few cases do I remember finding in young women any organic condition demanding special interference. In the middle-aged and multiparous class the flexions and versions are common. Even in this class, however, much mistreatment has been instituted.

In a recent *Journal of the American Medical Association* was a long article on "Backaches in Women," that as usual considered pelvic derangement the most common cause. The author of this article omitted entirely one of the most frequent conditions met with. Achilles Rose of New York describes this condition as a lumbosacral periostitis, and describes it as follows:

"The characteristics are circumscribed pain on pressure over the affected process. The pain is present especially during the night, when the patient is in a warm bed or on awakening in the morning. There is less or no pain during the day while the patient is about. There is slight elevation of temperature in the evening. The pain radiates sideways or downward; never ceases on its own account, but lessens and gradually will cease entirely under treatment for periostitis, which in this affection is an application of leeches close to the spinal process from which the pain proceeds. This promptly secures decided relief. The next step is painting the skin surrounding the affected spinal process once a day with tincture of iodin and internally administering iodid of potassium." According to his experience, this treatment has to be continued for a long period, because the pain, although continually diminishing, will only cease completely in the course of time.

At the present time I have several patients who have been treated by various methods since puberty. These girls were sent to me anticipating castration. After a careful examination, and the finding of superficial as well as deep tenderness, with no abnormality in any way, I advised against surgical interference. A predominant factor in all these cases has been a morbid tendency in the mind of the patient. They have doctored so much and so unsuccessfully that the physician has blamed the patient with having an incurable condition, and this mental attitude is the one I aim to overcome first. If my patient can leave the office smiling I know she is half cured. If I can have her return to me and knowing I have gained her confidence, have her believe me when I tell her she is going to get well, future consultations will be something different than a recital of complaints. Not all cases will believe you, not all cases give you their implicit confidence, not all cases are cured, but, best of all, fewer cases are being mutilated.

The ilioinguinal region offers brilliant results to the conscientious application of suggestive therapeutics, and physical development does more than surgery or medicine in this class of cases. In these cases where the greatest factor is the nervous element, the immediate results of any operation is always good because the patients have had something new, yet even operations become a habit.

These cases upon which we have operated, finding no pathologic changes, have been possibly justifiable as exploratory operations, but as our experience increases, fewer such operations will be done. Frequently such measures are the only ones that will be acceptable to the patient as positive, and there are cases in which it is not policy to talk overmuch; but the patient's family should always be informed, because in these neurotic types as much good can be done by home suggestions as by the physician.

I know of nothing more pitiable than the desires of a woman for a babe of her own. Solomon, who is said to have had 800 wives, spoke from experience when he said that the barren womb is one of three things that is never satisfied. The recent work and articles by Morris of New York and Martin of Chicago should be considered most seriously—heterotopic transplantation of ovaries, before advising an ovariotomy.

As means of relief in certain cases the same nerve-blocking process is used as the Schlosser treatment for other forms of neuralgia, viz., alcohol injections, deep intramuscularly over the most sensitive point and along the course of the nerve.

This article considers no case that justly requires surgical interference, of which there are

only too many. It is simply a plea for a more conservative attitude in advising operations for conditions that give no gross evidence of pathologic change. It is a plea for more sympathy and common sense, and at times the advisability of the surgeon giving "plain talks" to those whom he has to consult him and with whom he has to consult.

A final word as to the management of these cases. Mental treatment is necessary in all cases. Physical development in out-of-door exercises is the keynote to the entire situation. Without an asset of physical good health, nerve strength is an incongruity. Walking, horseback riding, lawn tennis and gardening are insisted upon, instead of the bird-cage exercises indulged in housework. A proper fitting corset, elevating the lower abdomen and pushing up the viscera, holding them in a more normal position, has been almost a routine necessity. Certain cases require medicinal stimulation, especially to overcome renal and intestinal defects, for there is usually a constipation and defective elimination of urea. Other cases respond to mechanical therapy, vibratory massage of the abdominal muscles and stimulation of the posterior nerve roots. Other times electrical stimulation in the form of positive galvanism accelerates the progress of the case. Above all things, however, must be the patient's willingness to help the physician in his efforts to get curative results. Each patient must be studied as an individual and not as a case. Each patient must be treated in regard to her surroundings, her environment, her associates and her family duties, and the facts concerning all these will have a part in the prognosis. These measures I have used in various cases for the past five years, and the results are so flattering that I feel I have been justified in writing this paper, which, though it contains nothing startling or original, is a simple record of a series of observations that may prove of some value to others who have been as sorely tried and as often disappointed as I have been.

DISCUSSION.

DR. J. H. FORD, Indianapolis:—Many cases of pelvic pain are due to a rather obscure trouble in the sacroiliac synchondrosis, which is supposed to be an immovable point, but which Kellogg, of Boston, and Bland, of Washington, have demonstrated to have more or less motion. There is usually more or less pain in the interpelvic region, down the thigh in the sciatic region. It may be due to a luxation of the joint, to a fall, a wrench of the back, etc. But these patients have prolonged and intense suffering. They will waken up at 3 or 4 o'clock in the morning with pain, unable to turn over in bed, and have all the symptoms of interpelvic trouble. Now this trouble is usually unrecognized except by the man who is

doing a great amount of emergency surgery and sees a great many back injuries. The diagnosis is so simple and easy that anyone can demonstrate within 24 or 36 hours whether it is correct. The diagnosis is in correcting the disability by strapping the pelvic region and backing up the joint with adhesive plaster. Two strips brought well over the brim of the pelvis in front and brought around with good firm pressure, bringing the joint together firmly, in 24 or 36 hours will demonstrate whether this joint is the source of the trouble. The patients will come to you in a day or two and tell you they can turn over in bed, sleep without difficulty and have no difficulty in turning around. If that is the diagnosis then you had better put on some further apparatus to tighten the joint, with webbing, belt buckles, if convenient, and a perineal strap to keep it down, and that will be all the apparatus necessary to cure the difficulty. Wear it two or three or six months and the patient will be absolutely cured.

DR. SCHMAUSS, Alexandria:—I think Dr. Austin ought to be congratulated on recognizing that there are conditions in the pelvic region that do not require operation. That will save the humiliation of operating cases and have them come back not relieved. I had recently a case with a small hernia complaining of pain over the crest of the ilium which, I think, was due to the hernia; but she also complained of a severe pain at the tip of the coccyx. She dropped into an osteopath's office and he put her on the table and with his assistant stretched and pulled her until they thought it was enough, and the outcome was that the pain in that side was relieved. He massaged or twisted or pulled the tip of the coccyx and that pain was also relieved by one treatment. It simply shows that there are cases where they have a little neuritis or arthritis that will be cured by such treatment. Dr. Austin's paper, of course, presented the question of diagnosis. We have to know whether we have a functional disturbance or an organic trouble, and unless we do that we will not succeed in our treatment. Fresh air and sunshine will not help those in which we have a pathological condition. I wish to call attention to the fact that in many cases of floating kidney we have some disturbance of the appendix and right ovary. I think Dr. Austin was mistaken when he said 80 per cent. of women have floating kidney. I think he meant 8 or 10 per cent. As to the treatment of floating kidney, if we have young girls or married women with good, rigid abdominal walls, a support or compression will do no good. They will not get well. It is different where a kidney comes down following an injury. We can undoubtedly cure that by putting the patient to bed and supporting it. On the other hand, if we have a case with a lax abdomen, a woman with many children, where we only want to have a temporary effect, support will do the work and keep the kidney in place until we build the patient up.

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EDITORIALS

THE EVILS OF DRUG EXPLOITATION.

Our attention has recently been directed to a circular gotten out and distributed by the William S. Merrell Chemical Co., Cincinnati, the title of which reads, "Lobelia; a Vegetable Antitoxin in Diphtheria," the dissertation being apparently the substance of a paper read before the Eclectic Medical Society of the State of Illinois. In it the author declares the superiority of lobelia over all other remedies, and particularly antitoxin, basing his claims on a series of 150 cases without a mortality. And the manner in which the author came to use this wonderful remedy in diphtheria is as truly remarkable as the wonderful curative power of the drug itself, to-wit: During a severe attack of nasopharyngeal diphtheria in his own 4-year-old boy, the author, after the administration of antitoxin in vain (?), had a *vision* in which a hand clearly pointed to the word lobelia; whereupon the author loaded his hypodermic with the tincture of lobelia and injected it, with the result that all the "fatal" symptoms gave way to those of returning health and the "death-struggle" to a "peaceful slumber." Even more, a third injection of the drug cured (?) the little patient of a post-diphtheritic pharyngeal paralysis. And we are positively assured that it makes no difference whether it is the first or sixth day of the disease, the remedy remains never-failing. What a truly remarkable agent this must be! And behold the accommodating physiologic action of the drug, for "if there is high pressure it acts as a sedative, if there is low blood-pressure it stimulates"—one of those circulatory equalizers that the detail man occasionally attempts to foist upon us. Nature is certainly kind to furnish us so automatic a drug, and we ought indeed to feel grateful to our eclectic brother who has displayed the wonderful merits of the agent, as well as to the pharmaceutical house that is not only good enough to manufacture it, but also to circulate this thrilling piece of literature.

Now, then, as to the probable merits of the case. The value of antitoxin in the treatment of

diphtheria has been demonstrated thousands of times, and is now so well recognized that even the most ignorant layman knows of its merits. The Boston statistics are only a fair sample of what has been accomplished the world over by the employment of the serum; for the twenty years from 1875 to 1894 the mortality (no antitoxin) was 14.46 per 10,000, whereas, from 1895 to 1904, by the use of the antitoxin, the ratio dropped to 6.42 per 10,000, a reduction of more than one-half, while in 1904 it was only 3.35 per 10,000 population. Given early (that is, the first day of the disease), McCombie found in 187 cases the mortality rate to be *nil*, while with the increase of time before its administration the mortality rate gradually ascends.

We know that lobelia in the dose indicated is a decided emetic, and it is more than possible that by the earlier administration of the antitoxin in this case, the diphtheria toxins were neutralized, the membrane loosened and ready to be coughed out or expelled through the emetic action of the lobelia. Of course, the patient would soon rally after ridding himself of the membrane, and the lobelia would receive the credit for what was due, in a great measure, to the earlier administration of the antitoxin.

The pity is that any reputable pharmaceutical house should be so selfish as to engage in the exploitation of a remedy of such doubtful and unproved value for so malignant an affection, when by years of hard and careful laboring science has at last evolved a rational remedy that has fairly revolutionized the treatment of the disease. If the William S. Merrell Co. does not desire to enter the field of biologic products in the conduct of its business, then, certainly, it ought at least lend its support to true science by refraining from an endeavor to influence some misguided soul to dash away precious time in untried medication when a definite, scientific specific stands ready to conquer a desperate disease.

OUR DEBT TO SANITARY SCIENCE.

Of vital interest to all those concerned in public health and sanitation is the excellent contribution of Kober's on "The General Movement of Typhoid Fever and Tuberculosis in the Last Thirty Years," published in the November, 1909, number of *The American Journal of the Medical Sciences*.

The average length of human life, estimated by Finkelnburg to be between eighteen and twenty years in the sixteenth century, and a little over thirty at the close of the eighteenth century,

has been extended since 1880, in civilized countries, about six years. That purer air and drinking water are two of the most important factors in bringing about this result, is proved by the marked decrease in the mortality from typhoid fever, diarrheal diseases and consumption in many foreign and American cities immediately following the introduction of sewers and improved public water supplies. For instance, the death rate in the city of Berlin has been reduced from 32.9 in 1875 to 16.4 in 1904; in Munich, from 41.6 in 1871 to 18 in 1906; in Washington, from 28.08 in 1875 to 19.25 in 1907; while in New York City it dropped from 38 per 1,000 in 1854 to 18.9 in 1906, a reduction of 50 per cent., which means an annual saving of 46,000 lives in that city alone. On the basis of an estimated population in the United States of 82,574,195, and a mean mortality reduction of 17.8 per cent., the human lives saved in 1905 alone, in our country, amount to over 290,000.

That cities are capable of contaminating their water supplies by their own sewage has been amply demonstrated by such typhoid visitations as were suffered by Chicago and Cleveland, and such discharge of sewage into inland waters is likewise responsible for the transmission of cholera, dysentery and diarrheal diseases from one city to another. From a study of Wilbur's statistics of the Bureau of Census, it is shown that whereas the mean typhoid death per 100,000 of population, for cities taking their water supply from large wells or conserved rivers and streams was 18.5, that of those cities using polluted river water reached the enormous total of 61.1, that of Pittsburg even reaching 133.1.

The calculations regarding the annual cost of typhoid fever in the United States, or, in other words, the hygienic value of pure water, are interesting. "According to the census of 1900, there were 35,379 deaths from typhoid fever during the census year throughout the United States; and based on an estimated mortality of 10 per cent., it is within reason to assume a yearly prevalence of 353,790 cases of this disease. If we calculate the average cost for care, treatment and loss of work to be \$300, and the average value of a human life at \$5,000, we have a total loss in the United States of \$283,032,000 from one of the so-called preventable diseases. Mr. George C. Whipple presents some striking evidence to indicate that a loss of \$10,000 for every death from typhoid fever is a conservative estimate, in which the decrease in the 'vital assets' during the census year of 1900 would amount to \$353,790,000. Reduce the prevalence of the disease one-half (which has been accomplished in Europe and in

our own country), and the question of the hygienic value of pure water will be answered from an economic point of view."

The immediate reduction of the typhoid death rate following the installation of filtration plants is proof positive that such reduction has not come about through any great improvement in the medical treatment of the disease.

Kober believes that 80 per cent. of typhoidal infections are water- and milk-borne, and about 20 per cent. may be spread through the agency of flies, personal contact, the consumption of raw oysters and shell fish raised in sewage polluted water, or the eating of strawberries, radishes, celery, lettuce and other vegetables and fruits which have been contaminated with infected night soil.

Hazen's computations show that as a result of filtration plants in five cities supplied previously with an impure water, there was not only a reduction of 81 per cent. in the deaths from typhoid fever, but also a marked reduction in the general death-rate, one death from typhoid prevented being equivalent to the prevention of probably two or three from others.

Likewise in tuberculosis, the erection of sewers means the eradication of air-contamination by cesspools and the construction of sanitary homes means more sunshine and fresh air, with less dampness.

The article concludes with the following logical deductions taken from the Report of the Conservation Commission of the North American Conservation Conference: "Since the greatest of our national assets is the health and vigor of the American people, our efficiency must depend on national vitality even more than the resources of the minerals, lands, forests and waters. The average length of human life in different countries varies from less than twenty-five to more than fifty years. This span of life is increasing wherever sanitary science and preventive medicine are applied. It may be greatly extended. Our annual mortality from tuberculosis is about 150,000. Stopping three-fourths of the loss of life from this cause and from typhoid and other prevalent diseases, would increase our average length of life fifteen years. There are constantly about 3,000,000 persons seriously ill in the United States, of whom 500,000 are consumptives. More than half this illness is preventable. If we count the value of each life lost at only \$1,700, and reckon the average earnings lost by illness at \$700 a year for grown men, we find that the economic gain from mitigation of preventable disease in the United States would exceed \$1,500,000,000 a year. This gain, or the lengthening and strengthening of life which it meas-

ures, can be had through medical investigation and practice, school and factory hygiene, restriction of labor by women and children, the education of the people in both public and private hygiene, and through improving the efficiency of our health service, municipal, state and national."

Certainly such facts warrant the establishment of a definite national health department, whose head shall be an integral part of the President's official cabinet, and that shall have final jurisdiction over all the state and municipal health boards.

MEDICAL EDUCATION.

A quarter of a century ago men left the farm, the shop, the factory and the store to attend medical lectures for two terms of six months each and, in many hundreds of cases, at the end of that time they were graduated in medicine. There were just two classes in the medical schools, and the same lectures were addressed to both. This seems like a voice out of the dark ages, but it was within the life of nearly every physician in practice at the present time.

What is a medical education to-day? In the majority of the states of the Union medical education is supervised by law, and the candidate for a license to practice medicine must satisfy certain legal requirements. The young man who wishes to practice medicine must not only pass an examination held by a legally constituted board of examiners, but he must meet certain requirements before he can enter a medical school. In the state of Indiana—and it should be said that medical education in Indiana is on a very high plane—the candidate for admission to the medical department of the University of Indiana for the year 1909-1910 must have credit for the freshman year in a college of liberal arts. And no one will be admitted after the present year who has not done the work of the freshman and sophomore years offered by a college or university. A goodly number of medical schools, nearly all of which are medical departments of state universities, require such preparation for admission. There are a few medical schools which admit only those applicants who present a diploma from a good college or university.

A number of schools have increased the length of the course by adding a fifth year. In Indiana the fifth year is optional for the present, though every student is urged to take it. Rush Medical College added a fifth year three or four years ago. The student spends the fifth year in a laboratory or hospital, working under the supervision of the

faculty. At the end of the fifth year he may receive the degree of doctor of medicine cum laude. The length of the college year is nine months.

The medical course offers a marvelous opportunity for mental development. The great need of to-day is the power of mental concentration, and if the medical course does anything at all for mental processes, it teaches the necessity of and offers the training for concentration. And the student who cannot acquire the ability of concentration is soon classed with the unfit.

The question as to whether medicine is a science is no longer debatable. The practice of medicine to-day by the great clinicians of the world is scientific, though there are many empirical procedures which are not now to be relegated to the realm of useless methods. Scientific medicine is not a sect or schism. It recognizes no such terms as allopathic, homeopathic, eclectic, physiomedical or regular practitioner.

Many men study medicine with no thought of engaging in practice. They enter some other profession or business. They always find comfort in the fact that they have a broad and useful education. Professor Musterberg and Professor James, both of Harvard, acquired a medical degree. Francis Galton never practiced medicine, "though most grateful for the enlarged insight into Nature." And he has always looked upon a medical education as being of great value in developing a well-rounded life. It is even more important to-day, because medicine draws upon all knowledge in her work of preventing and curing disease and rendering human life more livable.—*Indianapolis News*, Sept. 23, 1909.

THE POSSIBILITIES OF PREVENTIVE MEDICINE IN INFANT MORTALITY.

That from 100,000 to 200,000 lives of babies under 5 years are uselessly sacrificed annually in the United States is the opinion of Dr. Cressy L. Wilbur, Chief Statistician for Vital Statistics of the Census Bureau, as expressed in Census Mortality Bulletin No. 104. Of the total number of deaths, 691,574 returned for 1908 from the entire registration area, the bulletin states that nearly one-fifth were of infants under 1 year of age, and over one-fourth of children less than 5 years of age. When it is considered that as yet only eighteen states have been admitted to the registration area, and but 55.2 per cent. of the total population is represented in the mortality reports of the Census Bureau, it seems reasonable to suppose that another 200,000 children have

died from causes very largely preventable; at least, Fisher believes from 47 to 67 per cent. of the diseases of children under 8 years may be prevented. Indeed, Wilbur goes so far as to say that there is little reason for infants properly born, i. e., with ante-natal diseases prevented and under improved parental environment, to die at all in early years, except from the very few unavoidable accidents.

In his report on National Vitality to the National Conservation Commission, Fisher declares that "out of every 100 deaths that occur from each disease in which the median age at death is under 5 years, there could be prevented the following numbers: Premature birth, 40; congenital debility, 40; venereal diseases, 70; diarrhea and enteritis, the most important cause of infant mortality, 60; measles, 40; acute bronchitis, 30; bronchopneumonia, 50; whooping cough, 40; croup (which means diphtheria), 75; meningitis, 70; diseases of larynx other than laryngitis, 40; diphtheria (under its proper appellation), 70; scarlet fever, 50."

Such ill-defined causes as "heart-failure," "dropsy" and "convulsions," contribute 30 per cent. of the deaths that might be prevented; convulsions alone possibly 60 per cent. if the true cause, such as diarrhea or enteritis, were known. Every effort should be made to find the true cause of death whenever these indefinite terms are employed.

Considering the fact that governmental recognition of public health dates back only a little over half a century, some truly remarkable results have been accomplished, the death-rate for the registration area in the United States for 1908 being only 15.3 per 1,000 of population, probably the lowest figure that was ever reached in this country, and one that would several years ago have seemed truly remarkable.

It is greatly to be deplored that every state in the Union does not establish rigid rules concerning the proper registration of all births and deaths and their enforcement, for it is only in this way that our vital statistics will attain a national value.

EDITORIAL NOTES

THE fiscal year of the Indiana State Medical Association ends with December. It is not too early for county society secretaries to begin collecting dues for 1910, for, according to a by-law of the Association, the dues must be paid before February 1 or membership in the Association is

forfeited. THE JOURNAL is sent to only those who are members of the Association, and the mailing list is revised on February 1, when the names of all those who have not paid dues are cancelled from the list.

Dr. COOK, of north pole fame, was a poor and obscure medical man a few weeks ago. To-day his name is known all over the world because of his reported discovery of the north pole, and he has suddenly found himself possessed of a comfortable fortune, which is increasing with every stroke of his pen and with every word that he utters in public. It is reported that his published story of the finding of the pole netted him \$50,000, and that he received \$100,000 as a clean profit from a four weeks' lecture tour. However, this should not tempt any medical man to leave the practice of medicine and go into the exploration business.

WE have had numerous complaints concerning the late appearance of the last two numbers of THE JOURNAL, and in explanation we desire to say that the September number was purposely delayed in going to press in order to get all of the committee reports and the late announcements pertaining to the Terre Haute Session held early in October. The October number was also purposely delayed in going to press for the purpose of publishing the official minutes of the Terre Haute Session, and the copy did not come from the stenographers until after the date when THE JOURNAL usually comes from press.

FORT WAYNE has recently experienced a mild epidemic of smallpox, but an energetic and efficient city board of health has succeeded in getting the epidemic under control through vigorous quarantine regulation and general vaccination. Unfortunately, the disease got its start through a difference of opinion as to diagnosis, and the consequent failure to properly quarantine the suspected cases. The contention of the members of the board of health that the cases were smallpox was sustained by an expert from Chicago, and later by a government expert from the Marine Hospital at Washington. Compulsory vaccination of school children was ordered, and we are pleased to note that in a suit brought to force the school board to permit an unvaccinated child to enter the public schools, the judge of the Circuit Court has ruled in favor of the school board. Practically all employers of labor have insisted that

their employees shall be vaccinated, and this very general observance of the regulations and recommendations of the board of health has had the desired effect of limiting the spread of the contagion.

NEXT month a majority of the county medical societies of Indiana will hold elections, and we desire to urge every society to select an energetic and enterprising man as secretary. A society may live and even grow while having an indifferent and incompetent secretary, but such a society is the exception. The best county societies in the state are those having capable secretaries, and every society that is at present having a struggle to exist is due to have a new secretary. Generally speaking, a young man fills the office most acceptably, but under no consideration should the office be bestowed upon a man as an honor. There is no honor in the position except as a man creates honor from it by doing his work creditably, and if he does his work creditably it means sacrifice on his part to a duty he accepts. Only a few men are qualified to make good secretaries, but in every county medical society there usually can be found at least one man who, because of his systematic manner of doing things, his energy, enterprise and enthusiasm, is capable of filling the position satisfactorily, and such a man should not only be elected to the position of secretary, but continued in office as long as he continues to do his work well.

IN a recent address delivered in Chicago on the subject, "A New Puritan," our Indiana governor had something to say concerning a higher standard of civic and business morality in America, which is interesting as throwing some light on his attitude concerning the adulteration of food products. Among other things he says: "The average man to-day in America will go to his attorney to ascertain precisely how far he may go without tumbling over the brink of the precipice and landing in the penitentiary. The manufacturer, for instance, who employs benzoate of soda to save a few dollars, what shall we say of him? The effects of this preservative upon the child's life have never been adequately tested. It may kill the child. Is the manufacturer who makes use of benzoate of soda and assumes perhaps unconsciously the risk of killing the child to be looked upon as less guilty because his guilt is not so open as that of the thug who thrusts a knife between your shoulders in a dark alley? We have not yet in America reached the stage of

development where we are ready to hold a man responsible for those deeds which he does not actually commit with his hands. But this higher morality must and will be developed among us. We shall yet see the day when a man will not go to his lawyer to discover what is right and what is wrong, when he will look within himself and answer those simple questions with a sturdy integrity."

SOME of the most conspicuous medical frauds have the tacit approval and recommendation of the leading druggists. All kinds of remedies advertised to relieve or cure many incurable affections are advertised over the names of druggists who, according to the advertising matter, give their personal endorsement as to the value of the remedies. For many years a certain eye remedy, advertised to make old eyes young and to do away with the necessity of wearing glasses, has been advertised periodically, and quite recently this remedy is being widely advertised again, and always over the personal recommendation of some druggist in whose store the remedy is for sale. It would be difficult to find a more pronounced fraud, and we fail to understand how any reputable and conscientious druggist can either directly or indirectly recommend it, or further its sale, and thus be a party to imposition upon the public. Admitted that advertising creates a demand for the remedy, and the average druggist considers it necessary to carry what the public demands, there can be no excuse for personal recommendation of what the druggist ought to know is a fraud. Many ignorant people are led to purchase these worthless nostrums because of faith in the published recommendation of the druggist. The only explanation to be given concerning the druggist's part in this deception and fraud is that it means profit. It is only another case of selling a soul for a mess of pottage.

IT may not be out of place to call attention to the inappropriateness of the wholesale advertising which some medical societies secure from the lay press whenever a meeting is to be held, and the exploitation which certain medical men secure through this means. The public has but little interest in medical meetings as ordinarily conducted, and while a public announcement of the meeting, together with a list of the names of those who are to take part in the meeting, may be an item of news, we hardly think it is appropriate or in good taste to permit newspapers to have

information which leads to the most eulogistic praises of the skill or ability of those who are to appear on the program, and it certainly is a breach of ethics for men who are to read papers before some society to permit newspaper reporters to print extracts from the papers or reproduce a photograph of the essayist. We are aware of the fact that the enterprising reporter will oftentimes draw upon his imagination when writing up items of a medical nature, but usually he has received his information as well as the authority to use it from the man who is exploited in the newspaper article. Too often a prominent physician or surgeon who would scoff at the suggestion to advertise as a merchant does, will not only permit but solicit the most flattering newspaper recommendations of his skill in treating or curing certain diseases or classes of diseases, providing such recommendations are to go in the newspapers as matters of ordinary news. Such medical men are no better than the physicians who openly advertise and pay for the privilege of making their announcements to the public.

honest practice by expecting someone else to collect fees for him and keep the patient ignorant of the transaction. That the general practitioner who makes a diagnosis of appendicitis or obstruction of the bowels and assists the surgeon in operating the case is entitled to just compensation is unquestioned. But why not render a bill directly to the patient for, say, \$50 for time and attention, including assistance at the operation, instead of asking the surgeon, who perhaps charges \$200 for the operation, to give up 25 per cent. as a fee to the general practitioner for referring the case? Some of the surgeons and general practitioners are trying to ease their conscience by telling the patient that the fee covers all attention, including the fee of the general physician, but this savors of dishonesty, as long as the patient is kept in ignorance of the fact that it is the surgeon, not the patient, to whom the general practitioner looks for his fee, and the size of that fee depends altogether upon the generosity of the surgeon, as well as his willingness to pay for business.

We do not object to the fees which the general practitioner obtains, for we feel that he ought to be better paid, and he ought to receive all that he obtains through the dishonest practice of division of fees. But we hold and will continue to hold that he should obtain his fees honestly, and he should help to educate the public to an appreciation of the value of his services. Under no consideration can the general physician consider himself strictly honest if he practices division of fees in the common acceptance of the term, which, as we understand it, is without the knowledge of the patient, and the worst and most deplorable feature of the whole business is that division of fees leads to the referring of patients to the surgeon or specialist, not because of the ability of the surgeon or specialist, but because that particular surgeon or specialist offers the largest commission. The patient suffers and the doctor who refers the patient "sells his soul for a mess of pottage."

IT is reported that in various sections of the state the question of division of fees is one of considerable annoyance and oftentimes no little embarrassment. The question is one that will eventually solve itself, for the public will sooner or later put the stamp of disapproval upon the division of fees as usually practiced. Every man who gives or takes a commission should ask himself, Is the practice honest? If it is honest then why not take the patient into confidence and admit the details of the transaction? Reasoning further, if the patient is to know about the transaction, why is it necessary to have any understanding between the doctors as to what fees each shall receive? This matter can be settled with the patient, the surgeon charging his fee and the general practitioner doing likewise. The fact of the matter is that the division of fees is the means of some fellow's receiving that to which he is not entitled, for if he is entitled to what he gets by division of fees then there is no reason for the division of the fees, as he can do his own collecting. As an evidence that the practice is dishonest, it may be said that invariably the patient is entirely ignorant of the arrangement, and as invariably the man who accepts or demands a division of the fee insists that the transaction shall be kept secret.

We have always argued that the general practitioner is too poorly paid, but he has no one to blame but himself for this state of affairs. He is only making things worse by stooping to a dis-

DEATHS

DR. WILLIAM H. BURROUGHS died at his home in Shannondale, Ind., October 8, from nephritis, aged 59.

DR. GEORGE HAROLD GRIGSBY, a graduate of the University of Louisville, Ky., 1909, died at his home in West Baden, Ind., September 11, from typhoid fever, aged 26.

NEWS, NOTES AND COMMENTS

DR. O. F. RUDOLPH of Corunna, Ind., has recently moved to Corning, Cal.

DR. J. W. McCCLURE, formerly of Butlerville, Ind., has located at Milan, Ind.

DR. J. B. PORTER, of Elkhart, was recently married to Mrs. Electa Cleveland.

THE Post-Graduate Society of Miami county has resumed its weekly meetings.

DR. M. L. WAGNER (Purdue School of Medicine, 1907) has opened an office in Peru.

DR. J. P. SPOONER, of Peru, returned October 16 from a four months' vacation in Europe.

DR. HANNAH O. STAUFFT, of Elkhart, has gone to Europe, where she will spend a year in graduate study.

DR. QUINN, a graduate of Indiana Medical College, 1909, has located in Denver, and will practice there.

DR. C. F. FLEMING has recently moved from Wabash to Elkhart, where he has formed a co-partnership with his brother, Dr. J. C. Fleming.

DR. ROBERT M. CAMPBELL, West Point, has succeeded Dr. William S. Campbell, Lafayette, as secretary of the Tippecanoe County Board of Health.

THE Jeffersonville city council, on October 4, passed an ordinance fixing a license fee of \$50 for itinerant vendors of medicine on the streets, with penalty for each violation of the ordinance, of a fine of not less than \$50 or more than \$200.

THE new "Book of Instructions to Health Authorities," issued by the State Board of Health, contains all the laws relating to public health,

and is to be furnished to each county health officer, county judge, county auditor and prosecuting attorney.

THE President of the American Gynecological Society has appointed a committee to report at the next annual meeting in Washington, on the Present Status of Obstetrical Teaching in Europe and America, and to recommend improvements in the scope and character of the teaching of Obstetrics in America. The committee consists of the professors of Obstetrics in Columbia University, University of Pennsylvania, Harvard, Jefferson Medical College, Johns Hopkins University, Cornell University and the University of Chicago. Communications from any one interested in the subject will be gladly received by the chairman of the committee, Dr. B. C. Hirst, 1821 Spruce street, Philadelphia, Pa.

ON the invitation of the Department of State of the United States Government, the Fifteenth International Congress on Hygiene and Demography will convene for the first time on the American continent, in Washington, D. C., from Sept. 26 to Oct. 1, 1910. Section Three of this Congress deals with the subjects of the Hygiene of Infancy and Childhood: School Hygiene. Should any of the readers of THE JOURNAL know of any original work which is being done bearing upon this topic, the secretary of Section Three, Dr. Luther H. Gulick, 1 Madison avenue, New York City, will be glad to hear from them regarding the matter.

SINCE the publication of the October number, the Council on Pharmacy and Chemistry of the A. M. A. has acted on the following products:

Articles accepted for N. N. R.:

Suprarenalin Inhalant (Armour & Co.).

Bilein (Abbott Alkaloidal Co.).

Bilein Pills, $\frac{1}{4}$ gr., $\frac{1}{8}$ gr. and $1/12$ gr. (Abbott).

Iodone Oil (Henry C. Blair Co.).

Iodone Ointment (Henry C. Blair Co.).

Articles accepted for N. N. R. Appendix:

Comp. Yellow Oxid and Adrenalin Oint. (Manhattan Eye Salve Co.).

Cocaine and Adrenalin Ointment (Manhattan Eye Salve Co.).

EXAMINATION FOR HEALTH OFFICERS.

THE examination for health officers was held in Indianapolis September 30, according to the new health law, by the State Board of Health.

HEALTH LAW.

1. What are the powers and duties of the State Board of Health?
2. What are the qualifications, duties and powers for all health officers?
3. What is the penalty for violation of the Health Law and also for violation of the rules of the State Board of Health?
4. What is a nuisance as defined by the law, and how shall a health officer proceed to abate it?
5. How are expenses incident to disease prevention work paid?
6. How shall health officers proceed upon learning in any way of the existence of conditions which may generate, promote or transmit disease?

HYGIENE AND SANITARY SCIENCE.

1. What does the Science of Hygiene cover? In a word, what is Hygiene?
2. What do you understand by the term Sanitary Science?
3. What do you understand by the term State and Preventive Medicine?
4. Name the water-borne diseases.
5. Name at least five impurities found in the air of cities.
6. What effect does an excess of carbon dioxide in the air of a school-room have upon the pupils?
7. What have you to say about the carriage of infection by insects?
8. Describe the disposal of sewage by the septic-tank method.
9. Detail some relations of milk to disease.

VITAL STATISTICS.

1. What do you understand by the term Vital Statistics, their value and why collect them?
2. How are death, birth, contagious disease and marriage statistics collected? Answer separately for each.
3. Detail the conditions under which burial permits shall be issued.
4. If there is reason to think that foul play attends a death, what shall be the procedure?
5. What are the penalties for burying a dead body without a permit?
6. What is the procedure by which health officers shall compel the reporting of deaths and births?
7. What penalties lie against physicians for failure to report births and deaths?
8. What record books are required for keeping vital statistics?

FOOD AND DRUG LAW.

1. What would you consider insanitary conditions at: (a) Bakery? (b) A grocery store? (c) A canning factory?
2. Upon the discovery of insanitary conditions in a grocery, what would be your duty and how would you proceed?
3. An analysis of milk in your town shows the product to be adulterated. How would you proceed against the offender and on whom would you call as witnesses?
4. How would you proceed to determine the character of the public water supply of your community? If found insanitary, what would be your next step?
5. What constitutes a sanitary dairy? If you have reason to suspect that milk from diseased animals is being sold, state what you would do and how you would go about it.

SOCIETY PROCEEDINGS

ELEVENTH COUNCILOR DISTRICT MEDICAL SOCIETY.

The fourth regular session of this society was held at the Court House in Huntington, on Thursday, Oct. 21, 1909, with President John P. Spooner of Peru in the chair. All the counties were well represented when the chair called the morning session to order at 11 o'clock. A synopsis of the proceedings of the last meeting, held at Marion, was read by the secretary and adopted as read.

Appropriate resolutions concerning the death of Dr. B. C. Stevens were presented and adopted by the society.

The Committee on Arrangements announced a buffet luncheon at noon at the residence of Dr. Nelson; that the ladies would be entertained at the D. A. R. room in the Court House from 2 to 3, and at a reception and musicale at the residence of Dr. McIlvaine from 3 to 5, and a banquet to be served at 6 p. m. at the Presbyterian Church.

The election of officers resulted as follows: President, Dr. W. A. Fankboner, Marion; secretary-treasurer, Dr. J. L. Gilbert, Logansport. Delphi was chosen as the place where the next session of the society will be held, and the time, the third Tuesday of May, 1910.

Dr. M. H. Krebs read the report of the secretary-treasurer, in which he called attention to the struggles of the association to meet the expenses from the dues of \$1 per year, and said that at the present time the society is out of debt, and has a small balance. Beginning with a membership of seventeen, the society has increased until at the present time there is a paid membership of eighty-six. Meetings have been held at Peru, Logansport, Wabash, Marion, and Huntington. The financial report showed that a deficit of \$43.29 of last year has been paid from the income of 1909, and that in addition the expenses of the present year have been paid and there is in the treasury a balance of \$4.90.

Motion was made and carried that the president of the society appoint a committee to go over the by-laws and constitution and amend the same, and also harmonize the different copies if there be any differences, and report at the next meeting of the society at Delphi.

Dr. McCully of Logansport presented the following amendment to the by-laws:

"To amend Chapter 4, Section 2, in reference to the duties of the vice-president, to read as follows: He shall furnish to the district secretary a certified list of those who are not members of the local society, but who are eligible to membership, with their addresses. This list shall be furnished at least thirty days before the time of the next meeting, and these lists shall constitute the mailing list of this association."

The amendment was referred to the Committee on Constitution and By-laws, consisting of Drs. McCully, Krebs and Gilbert.

The scientific program began with a paper on "Influenza; Its Complications and Treatment," by Dr. E. G. Egan of Carroll. (Paper appears in full in this issue of THE JOURNAL.)

Discussion. Dr. Jordan of Wabash said that he approved the ideas expressed in the paper. He thought that absolute rest is of the greatest importance, as is also disinfection.

Dr. McCully called attention to the persistence of the effects of the infection, and said that he had known cases of prolonged illness and severe sequelæ which could be traced to influenza. The best way to prevent some of the disastrous sequelæ due to the effects of the infection is to keep the patient in bed and under appropriate medicinal treatment such as outlined by the essayist.

Dr. Hall of Camden said that influenza patients should be segregated or quarantined more than they are at present. He thinks that in no other way will we be able to control the epidemics of the disease which regularly appear.

Dr. Fankboner said that the disease should be considered contagious as well as infectious, and it was the duty of the physician to so advise patients. The best treatment is that which will not only relieve the patient but prevent others from contracting the disease.

In closing the discussion Dr. Egan said that he desired to emphasize the fact that the disease is infectious as well as contagious, and we do not ordinarily consider it as infectious as it really is. The disease itself may not be very serious, but the complications are often serious and intractable. He again emphasized the importance of absolute rest in the treatment of the disease.

On motion Dr. J. B. Simonds of the State Laboratory was called upon for a few remarks, and he confined himself to a discussion of some of the phases of the work of the State Laboratory. He said that the laboratory was established by the legislature and is maintained by appropriations. The only excuse for its existence is that it performs some actual service to the citizens of Indiana. This service must be rendered largely through the physicians. The value and importance, and even the necessity of a laboratory as an adjunct to the practice of modern medicine, is well established. Dr. Simonds said that at the State Laboratory an earnest effort was put forth to give physicians the most efficient service possible. Those in charge of the laboratory make it a rule to mail a report on the day the specimen is received, in all cases

except throat cultures, pathological tissues, and specimens from which bacteria must be isolated and identified. Smears are made from throat swabs as soon as received, and if unquestionable diphtheria bacilli are found the case is so reported at once. A positive diagnosis can very seldom be made from a swab, and a culture is usually necessary. The culture is examined after eight, eighteen and twenty-four hours, respectively. The case is reported positive as soon as diphtheria bacilli are found, but is not pronounced negative until the culture has grown for twenty-four hours. Reports on pathological tissues are mailed in from three to seven days from receipt of the specimen. The isolation and identification of bacteria requires from three to fourteen days.

Good laboratory service is aided by the proper collection and preservation of specimens. The physicians of the state are held responsible for this. The laboratory furnishes special containers and explicit directions for the collection of specimens, and when the physician is in doubt as to methods, these instructions should be consulted. Pathological specimens should be placed at once in a 5 to 10 per cent. solution of formalin and sent to the laboratory in this solution. There is a federal law against sending improperly wrapped pathological and bacteriological specimens through the United States mail. The outfits supplied by the laboratory comply fully with the United States postal regulations, and no one using these outfits will be in danger of getting into trouble with the federal authorities.

The work of the laboratory consists of the examination of sputum and various discharges for tubercle bacilli, throat cultures for diphtheria bacilli, blood for Widal reaction and malarial parasites, feces for intestinal parasites, urethral and vaginal pus for gonococci, dogs' heads for rabies, pathological tissues when the patient is unable to pay a private laboratory, water and milk which are suspected of being the source of infectious diseases. All services of the laboratory are rendered free of charge.

Dr. Simonds closed by inviting the physicians to make frequent use of the State Laboratory, and said that he believed that the laboratory can be of great usefulness in the prevention and the spread of infectious diseases.

In reply to a question, Dr. Simonds said that county health officers will be supplied with the containers, or the containers will be sent direct to any physician who applies for them.

Acute Endocarditis was the title of a paper presented by Dr. W. A. Fankboner of Marion. (Paper appears in this issue of THE JOURNAL.)

Discussion. Dr. Simonds of the State Laboratory said that when he saw from the program that Dr. Fankboner's paper could be illustrated by pathological specimens taken from the state laboratory, he at once wrote to Dr. Fankboner offering to bring the specimens to the meeting. He stated that he would be very glad to cooperate in a similar way with any physician who desired to present a paper before his local society, and invited all present to call at the state laboratory for specimens to illustrate their papers whenever they so desire.

In connection with Dr. Fankboner's paper four specimens were presented. First, a specimen showing aortic insufficiency. Two of the aortic cusps had become firmly adherent along their adjacent borders and rolled downward so that the coronary artery appeared to be given

off above the level of the upper margin of the cusp instead of from the sinus of Valsalva. One of the cusps was partially calcified. The aorta showed marked atheromatous change, and the valvular lesion was probably due to an extension of this stenosis. The chordæ tendinæ were shortened, the mitral leaflets were contracted, thickened, partially calcified and firmly adherent to each other along the greater part of their free margins, leaving only a small "buttonhole" opening. The condition was evidently the result of a previous acute endocarditis. The third specimen was from a case of pneumonia and showed several soft, unorganized vegetations on the tricuspid valve. The acute endocarditis that sometimes complicated pneumonia was said not to result so frequently in chronic lesions as that occurring in rheumatism. The last specimen was one of an extensive mitral endocarditis engrafted on a chronic lesion. Both mitral leaflets and a large portion of the interauricular septum were covered with firmly attached wart-like masses. This case illustrated the difficulties of diagnosing acute endocarditis, as it had been diagnosed acute pulmonary tuberculosis by two of the best men in central Indiana. At autopsy there was no evidence of tuberculosis anywhere in the body. There were infarcts in the spleen and kidneys and gangrene of the foot. The development of hemiplegia a few days before death was strong evidence of the lodgment of an embolus in the brain.

Dr. Freezee, in discussing the paper, said that he had a case of endocarditis as a sequela of rheumatism, which was worse in the winter but got better in the summer months. The case improved under general treatment and finally got entirely well.

Dr. Griswold of Peru, in discussing the paper, reported a case of extensive myocarditis following an attack of acute rheumatism in which very extensive heart lesions were found upon autopsy.

Dr. Fretz emphasized the importance of rest in the proper treatment of heart lesions.

In closing the discussion Dr. Fankboner said that the diagnosis is sometimes clouded. There may be a murmur and yet no valvular disease. In the case of gummata the disease may exist without giving evidence of it.

A Mechanical Assistant for the More Correct Adjustment of Colles' and Pott's Fractures, was the title of a paper presented by Dr. Cady of Logansport. (Paper appears in this number of THE JOURNAL.)

Discussion. Dr. Kitson of North Manchester said that he thought Dr. Cady's paper was hard to understand, and the appliance described was a very complicated affair. Dr. Kitson said that in his practice in the reduction of Colles' fracture a strong board splint had proven satisfactory, and he had never seen but one bad result in the use of the splint. He said he thought that the Cady apparatus might be a good thing, but seemed to be too complicated.

Answering Dr. Kitson, Dr. Cady said that if his apparatus was considered complicated it should be remembered that the joint with which we are dealing is four times more complicated, and if we can not understand the apparatus then we ought not to tackle the joint.

Dr. McCully said that he had reduced fractures with the aid of the Cady mechanical device and had also used the various splints that had been recommended. The Cady method is pain and time saving. The pain is caused by the faulty position and faulty adjustment with tight bandage. With the Cady apparatus the

position of the limb is fixed. No man who reduces a fracture with the apparatus described by Dr. Cady will use any other method.

In response to a question Dr. Cady said that he devised the apparatus twenty-five or thirty years ago, and has used it persistently ever since.

Dr. Griswold of Peru said that he had known of the Cady apparatus but had not used it. Colles' fracture must be reduced first, and if you have done that, then you have done all. If you have a patient you can trust you can put the arm in a sling and tell him to keep it there and all will go well. Ready-made splints are a nuisance. The most important thing is to first reduce the fracture. A child will not stand a little pain and should be given an anesthetic. A grown person will often permit reduction of the fracture without an anesthetic. When the fracture has been reduced it makes but little difference what kind of a splint or bandage is used after that.

Dr. McCully said, with reference to Dr. Griswold's discussion, that when you reduce a fracture, sometimes you can do it quickly, as Dr. Griswold says, but at other times it cannot be done so quickly. Therefore the splint is an admirable device and holds the hand steady.

Dr. Fankboner said that he thought Dr. Cady deserved a great deal of credit for presenting such an admirable device. Dr. Fankboner said that he never used the same splint twice. He uses cigar boxes which he keeps on hand in his office, and he pads the splints. The apparatus displayed by Dr. Cady has an advantage in that it holds the fracture in place after you get it there.

In closing, Dr. Cady said that what he claimed for his device is that its sole purpose is to hold the broken portions, or in other words, it holds the parts in the position you want them and fixes them there.

Status Lymphaticus was the title of a paper by Dr. Aaron Kern of Wabash. (Paper appears in full in this number of THE JOURNAL.)

In discussing the paper Dr. A. J. Chittick of Burlington said that status lymphaticus is a disease of the lymphatics and of early life. We all know that the lymphatic system is composed of closed vessels whose current follows but in one direction, viz., from the periphery to the center and discharges into the veins near the heart. This discharge is fluid, nearly or quite colorless. These vessels with the lymphatic glands constitute what is known as the lymphatic system. These vessels penetrate every tissue where blood vessels are found. They act as absorbents and hence are the principal carriers of septic infection from the skin to the central circulation.

The lymphatics, too, are involved in all wounds. In the serous flow from wounds, which necessitates drainage, several lymphatic vessels are involved.

The numerous superficial plexes of the skin really absorb antiseptic or poisonous solutions applied to the surface and explain remedial action or poison, as the case may be.

The amount of lymph is greater in children and the lymphatic glands are more highly developed and active. As the glands are distributed along the lymphatic spaces any foreign substance absorbed by the lymphatic system is distributed more or less to the glands, and as the thymus is a gland, and the spleen a gland, as well as the lymphatics are glands, and as the lymphatics are enlarged in this disease, I think that we are to conclude that this peculiar disease called

status lymphaticus is produced by a toxemia. Possibly a germ or, what is more likely, a combination of germs or their toxins. As proof of the above theory we find in typhoid many changes in the lymphatics, thyroid, spleen, etc. Hyperplasia of blood vessels, changes in the heart and changes in the bone marrow, and all of these lesions, with some others peculiar to itself, we find in lymphatics.

In following the essay and the literature on this subject it would seem absurd to say that thymus gland was the cause, or even to pick out any one thing that might be the cause of these symptoms.

The thymus gland and the tonsil, as well as the spleen and the intestinal glands along the intestinal tract are always enlarged in this disease. It is due to the poison spending its force on glandular tissue and not the glands producing the poison that causes this disease. In other words, I feel that we must look for causes other than enlarged thymus and hyperplastic bone marrow.

As to diagnosis it seems to be, with our present knowledge, impossible to make it before death and then only by an examination of the thymus. As death, sudden death, is liable to overtake these unfortunates who have this disease, and as all the symptoms are not present at all times, I think it fair to regard the disease as a remittent lymphoxemia.

Further, I feel that to ascribe as one of the causes of sudden death in this disease, mechanical results, is misleading and mischievous and will prove one of the factors that will go to bar and prevent a scientific investigation of this most peculiar disease.

As to treatment, were it possible to make the diagnosis, the clinical facts are so meager that there is no specific to offer.

From the facts as presented to-day it will be well for us to suspect all children and young adults who have an asthma, laryngismus stridulosus, adenoids, enlarged tonsils, transparent skin, flabby flesh and weaklings. Be careful in prognosis. Slow to advise an operation. And cautious with anesthetics.

The banquet for the doctors and their wives and friends was held at 6 p. m. at the Presbyterian Church. The following gentlemen responded to toasts: "A Side Issue—Lovely Woman," Dr. G. R. Daniels, Marion; "Why do Men Lie to Their Wives?" Dr. C. L. Thomas, Logansport; "The Rainy Day," Dr. J. A. Freeze, Bunker Hill; "Will I Be in It When My Money Is Gone?" Dr. C. E. Scholl, Caunden; "Don't Worry—I'll Pull You Through," Dr. L. W. Smith, Wabash. Toastmaster, Dr. A. H. Shaffer, Huntington.

Adjourned.

MAURICE H. KREBS, Sec.

ALLEN COUNTY.

FORT WAYNE MEDICAL SOCIETY.

Meeting of Sept. 28, 1909.

The society met in regular session in the assembly room, with twenty-two members present. The minutes of the previous meeting were read and approved.

Dr. B. Van Sweringen reported patient with foreign body in trachea. Child two years old. Child was eating watermelon, when foreign body lodged in throat. Cough developed, which became croupy. On auscultation of chest foreign body was located in right

bronchus. Tracheotomy was made, and a watermelon seed exposed and grasped. Trachea and wound closed. Recovery uneventful.

Discussion by Drs. Drayer and McOscar.

Legal Restriction of Marriage was the title of a paper by Dr. E. M. Van Buskirk, in which he quoted statistics to show that in consanguineous marriages the offspring were very frequently epileptics, feeble-minded and imbeciles. He said that marriages of uncles and nieces were more likely to be productive of imbeciles than where cousins marry. Epileptics should not marry because of the effect on each other and the liability of begetting offspring who will be neurotics, epileptics, etc.

Discussion by Drs. Bulson, Buchman, Drayer, Morgan, Dancer, B. Van Sweringen, McOscar, Beall and Bruggeman. Closed by Dr. Van Buskirk.

Rights of the Unborn Child was the title of a paper by Dr. G. Van Sweringen, in which he took up the question of criminal abortion. He said that most of the illegitimately pregnant who later go to marriage allow the pregnancy to go to term. The essayist classes drugs under criminal abortion, and holds the husband with syphilis who knowingly infects his wife as responsible for the abortions that are sure to follow. Well posted educators are now tiding over where previously therapeutics and instrumental interferences were practiced. The laws on the prevention of abortion are all right, but are not enforced.

Discussion by Drs. McOscar, Weaver, B. Van Sweringen, Bulson, Bruggeman, Drayer and Hamilton. Closed by Dr. G. Van Sweringen.

Resolution to amend Section VII of the by-laws was then brought up and on motion was adopted.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Oct. 5, 1909.)

Society met in regular session in the assembly room, with twenty-two members present. Minutes of previous meeting read and approved.

Typhoid Complicated by Appendicitis.—Case report by Dr. E. J. McOscar. Patient had general abdominal pain with diarrhea. Temperature, 100-102. Diagnosis of appendicitis was made. Diarrhea was persistent and did not yield to the usual astringent and anti-septic treatment after bowels had been emptied thoroughly. Abdomen remained flaccid, with general pain, for eight days, when right rigidity appeared. Case removed to hospital and on operation an abscess extending from the cecum upward, behind colon, was found. The abscess cavity was covered with whitish diphtheritic-like membrane. In this case the appendicitis, with subsequent abscess, was secondary to the intestinal disease.

Discussion by Drs. Porter, B. Van Sweringen and C. E. Barnett. Closed by Dr. McOscar.

Angio-Neurotic Edema was the title of a paper by Dr. H. O. Bruggeman, in which he said that angio-neurotic edema is not entitled to separate classification of disease. Heredity seems to be the etiological factor, and Osler has traced the disease through six generations. Exciting causes are worry, nervous exhaustion and unusual excitement. The affection is a localized edema, which affects the skin, the favorite locations being the exposed parts. Severe abdominal colic occurs, which may be accompanied with diarrhea and passage of blood. The author referred to a case

of abdominal colic, with marked prostration and vomiting. Was operated, and appendix and part of one ovary removed, but no relief. In these attacks the belly is soft and free from distention. Eight or nine of these attacks of abdominal crisis occur to one attack of skin symptoms. Edema of the glottis, on investigation by the author, is found not to be a rare event.

Discussion by Drs. B. Van Sweringen, Kimmel, Rawles, G. Van Sweringen, Porter, and closed by Dr. Bruggeman.

On motion Dr. Bruggeman's paper was referred to the state society.

Motion was made and carried that the society endorse the action of the State Board of Registration and Examination in their attempt to revoke the licenses of the Hot Springs doctors.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Oct. 12, 1909.)

Society called to order at Lutheran Hospital, with twenty-one members present.

Dr. Drayer presented the following cases:

1. Babe, 2 years and 4 months old. This case has been shown before, when there was a question as to whether he could see or not. Has had a number of attacks of petit mal. The question arises as to whether it is a case of plain idiocy or one of the Mongolian type. He sees and hears. Had been kept on thyroid extract for more than a year, with some improvement. Has not been taking the extract of late and improvement has stopped to some extent. Dr. Drayer thinks this is a border-line case between Cretinism and Mongolian idiocy. Thinks it is advisable to keep him on thyroid extract.

2. Boy two and a half years old; specific case. Inherits it from both sides. At 16 months of age had series of convulsions, and following this had complete aphasia and hemiplegia. Put him on enormous doses of K. I., 20 grains, along with 20 grains of mercury by inunction. Is still under K. I. Has not had a convolution for ten months, and speaks perfectly. He has been transformed from a cripple to a boy who can walk. Has put on a brace to encourage him to walk. Is using electricity to bring up the tone of the muscles.

3. Boy, aged 5 years, with monoplegia of right arm. Antecedent history is not known. There is shrinkage of muscles. Dr. Drayer has concluded that the condition is due to a poliomyelitis. Patient has never had any treatment.

4. Boy, 14 years of age. Two years and a half ago was operated on for supposed appendicitis. Was found to have tubercular peritonitis engrafted upon suppurative appendicitis, with general peritonitis, and later pneumonia. However, he recovered. Was in bed for nine weeks with a gaping wound in belly, and was taken out to institution to die. There he was put to sleeping out of doors, and still continues to sleep out of doors. The scars show plainly, and the boy is apparently well.

5. Boy, with injury of knee seven years ago. Injured knee was put in cast, and while carrying cast he broke his leg about the knee. This was reduced and he was again put in cast, and he fell and again broke the leg. It was then found that he had an osteomyelitis. Leg was broken again. With a tuberculosis of the knee joint, ascending osteomyelitis and fractures, amputa-

tion of leg was considered, but thought he had a chance to get well, so put on splint with apparatus at the rear to straighten out knee joint occasionally, a little at a time. Patient now seems to be getting along nicely, and runs and plays just like the other boys.

Discussion by Dr. Porter, who said he had a specific case taking 400 grains of K. I., together with one drachm of red iodid of mercury a day, and it is relieving him of the symptoms of his brain tumor. He has been in the hospital ten days. There has been no evidence of iodism or ptyalism. Advocates the use of faradic current in the palsied limbs.

Discussion closed by Dr. Drayer.

Dr. Duemling presented the following cases:

1. Boy, aged 16 years. Two and a half years ago had pain in right lower jaw, and second molar tooth was extracted. There was also marked swelling of lower jaw on right side. Portion of maxilla projected outward and downward. The tumor on palpation felt mushy, and on inspection was found to be covered with mucous membrane, and was translucent. The whole tumor was cut down and cleaned out, and Dr. Duemling thinks now the shell should have been broken down. Tumor diagnosed as myeloma.

2. Man, aged 60, with angioendothelioma. Last August he noticed small lump over malar prominence. Had had no injury. Went to a physician who sent him to a dentist. Two teeth were pulled. September 28 specimen was taken for diagnosis. Upper left maxilla was scooped out, and cavity packed with two drachms of salicylic acid. Is improving nicely.

Discussion by Dr. Rosenthal, who said that rapid growth and high grade of malignancy are main characteristics of growths of antrum, along with enlargement of glands. He said he had seen a case of fibroma of antrum where the growth was as large as the man's head. Also discussed by Drs. Weaver and Porter. Closed by Dr. Duemling.

Adjourned.

J. C. WALLACE, Sec.

(Meeting of Oct. 19, 1909.)

Society met in regular session in the Assembly Room, with ten members present. The secretary being absent, Dr. Kane was appointed secretary pro tem.

Clinical case report by Dr. McOscar. Patient, woman, aged 25, had severe attack of epigastric pain, with vomiting for an hour. Tender to pressure over stomach and gall-bladder region, but no pain in lower abdomen. She gave history of stomach trouble for one year, with eructations of gas after meals and mild attacks of stomach cramps. Gave hypodermic of morphin 1/4 and atropin 1/150, and washed out stomach with hot water, but patient not relieved. In addition she complained of painful pressure in rectum, the latter having been a frequent symptom for some time. Pulse good, but pain in stomach region unabated. Gave 1/8 gr. morphin with strychnin hypodermatically. In three hours patient became numb, showed deathly pallor, was extremely restless and constantly wanted water. Taken to hospital and immediately operated, the abdomen being filled with blood and clots. Ruptured right tubal pregnancy was found: tube clamped; abdomen emptied of blood: tube ligated with catgut, and abdominal wound closed after filling cavity with hot normal saline solution. Gradual recovery.

Tuberculosis of the Hip Joint was the title of a paper by Dr. Weaver.

Discussion by Drs. Rawles, Boyers, McOscar, C. E. Barnett, and closed by Dr. Weaver.

Injuries of the Elbow Joint.—Paper by Dr. D. C. Wybourn. Discussion by Drs. C. E. Barnett, Weaver, Beall, Boyers, Porter, and closed by Dr. Wybourn.

Adjourned. ALFRED KANE, Sec. Pro Tem.

ELKHART COUNTY.

The Elkhart County Medical Society met in regular session at Nappanee, October 7. This was one of the most successful meetings ever held by the society, forty-six members being present. Dr. Christophel, of New Paris, was elected to membership.

Dr. J. D. Inks reported a case of infantile paralysis, and in the discussion which followed it became evident that Elkhart county is being visited by an epidemic of anterior poliomyelitis, over thirty cases being reported by physicians present.

Migraine was the title of a paper read by Dr. H. J. DeFreese, of Nappanee, in which the author reviewed the known facts as well as the chief theories regarding its pathology, etiology and symptomatology. Emphasis was laid on the differential diagnosis between the various headaches. He quoted authors who believe that migraine cannot be cured, but expressed his belief that much can be done for some of these patients if treatment is begun as soon as the disease is recognized, as one attack predisposes to another. He recommends constitutional treatment between attacks, the correction of eye strain, the removal of adenoids and tonsils when indicated, the withdrawal of alcohol and coffee, the careful regulation of the diet, and the correction of constipation. He said that acetylsalicylic acid was the most serviceable drug, both as an analgesic and as an intestinal antiseptic.

Dr. Kuhn presented a paper on "Occipito-posterior Positions," in which he said that he believed they were more prolific for trouble and anxiety for the obstetrician than any other one thing. The pains are usually irregular, the os is slow to dilate, and heart sounds are heard in the flank instead of on a line from the umbilicus to the anterior iliac spine as is the case in anterior positions. The author spoke of three methods of applying the forceps: First, that usually practiced in Germany and Austria, of applying them to the sides of the pelvis irrespective of the head, and making no attempt to rotate the head to an anterior position. Episiotomies and severe perineal lacerations are very common following this practice. Second method consists in applying forceps as before and attempting to rotate the head at the same time traction is made. The third is known as Scanzoni's maneuver and consists in the double application of the forceps, first with the concavity toward the child's face, and the second time with the concavity toward the occiput. After first application downward traction is made until head reaches pelvic floor, when rotation is brought about and forceps removed and reapplied. The author commends the double application of forceps, and says that when properly understood it will not be abandoned.

After the program the local medical society of Nappanee tendered the physicians a banquet at the Hotel Copps.

Adjourned.

A. A. NORRIS, Sec.

KNOX COUNTY.

The Knox County Medical Society held its regular meeting in Vincennes, August 14. Meeting called to order by President Smadel, with fifteen members and one visitor present.

Summer Diarrhea in Infants was the title of a paper by Dr. C. E. Stewart, which was very comprehensive and brought out a good discussion.

The Treatment of Typhoid Fever was presented by Dr. W. P. Boal. Discussion.

Dr. J. N. McCoy presented two cases of epithelioma of the face, which he had been treating with the x-ray. Photographs were taken at beginning of treatment, and showed that marked improvement had been made. X-ray is preferable to surgical procedure in cases of this kind, from a cosmetic standpoint, there being but little scarring. Discussion.

Adjourned.

CHAS. S. BRYAN, Sec.

(Meeting of Oct. 12, 1909.)

Society called to order by President Smadel, with twenty-two members and three visitors present.

Dr. W. H. Davenport told of some of his experiences with neuralgia.

Dr. M. G. Moore presented a case, child, female, aged 9, with all regular symptoms of tubercular hip joint disease, and in addition a greatly enlarged and hardened liver, edema and signs of venous stasis, diagnosed as sarcoma.

Dr. J. P. Simonds, superintendent of the Indiana State Laboratory of Bacteriology and Pathology, gave an interesting talk on "The Laboratory and Its Relation to the Practitioner."

Dr. B. B. Griffith was elected to membership.

The application of Dr. H. D. McCormack was read and submitted to the board of censors.

Adjourned.

CHAS. S. BRYAN, Sec.

KOSCIUSKO COUNTY.

The regular meeting of the Kosciusko County Medical Society was held October 26, with eighteen members present.

Dr. A. C. McDonald reported a case of typhoid fever in which there had been recurring chills with fever, and subsequently a subnormal temperature with blood in the stools.

Dr. M. G. Yocom, of Mentone, read a paper entitled "Diagnosis and Treatment of Some of the Commoner Diseases of the Ear," and Dr. N. A. Carey, of Silver Lake, spoke on the subject of "Etiology and Treatment of Acute and Chronic Nasal Catarrhs."

In the discussion Dr. McDonald mentioned the value of a 20 per cent. solution of carbolic acid in alcohol in acute otitis media.

Dr. Carey spoke of the value of a couple of drops of 98 per cent. alcohol instilled into the ear two or three times a week in chronic suppurative otitis media.

The society unanimously accepted the invitation of Dr. W. L. Hines to witness an autopsy after the regular meeting. The case was one of nephritis with abdominal tumor. The kidneys were found in an advanced condition of cystic degeneration. The tumor was found to have consisted of a much enlarged and hypertrophied bladder.

Adjourned.

C. NORMAN HOWARD, Sec.

MIAMI COUNTY.

The Miami County Medical Society met at Peru October 29, 1909, with thirteen members present. Meeting called to order by President Ridenour.

Arrangements were made to bring the state tuberculosis exhibit to Miami county during November.

The Duties of the Accoucheur was the title of a paper by Dr. E. H. Andrews, in which he said that in justice to the expectant mother the accoucheur should be engaged early. Antiseptic precautions should be as thorough at delivery as in any major operation, and the instruments should be disinfected with formaldehyde after each delivery. Frequent examinations per vagina are unwise and may produce harmful results. A large percentage of lacerations may be prevented by retardation of labor and manual support of head and perineum in the second stage. Unless contraindicated, the cord is never cut until pulsations have entirely ceased. Immediately after delivery of placenta, one drachm of Squibbs' ergot should be administered to prevent post-partum hemorrhage.

Discussion by Drs. Yarling, Peters, Griswold, Jordan and Carter.

Adjourned.

P. B. CARTER, Sec.

PORTER COUNTY.

The Porter County Medical Society met in regular session, October 5, with President Lowell in the chair.

Prof. DeWitt, of the Medical Department of the Valparaiso University, read a paper on "Finding the Tuberclle Bacillus in the Blood." The paper was devoted to the technique and value of its discovery, cases being cited to show that it is positive in a large per cent. of cases, and frequently before a clinical diagnosis can be made. Professor DeWitt extended an invitation to the members of the society to make use of the laboratories in making tests and research. Discussion.

Dermatitis was the title of a paper by Dr. Douglas, in which he made an attempt to classify all skin diseases in such a way that they might be given correct treatment, even though a positive diagnosis was not possible. The general divisions were: (1) Those calling for parasiticides or antiseptics; (2) those calling for soothing applications; (3) those needing stimulation.

The discussion brought out the fact that the average physician in general practice finds skin diseases his most vulnerable spot.

It was agreed to allow no cases of scarlatina out of quarantine under four weeks.

Adjourned.

G. R. DOUGLAS, Sec.

SPENCER COUNTY.

The Spencer County Medical Society met in regular session, October 19, at Rockport, with Drs. J. A. and S. C. Long. Minutes of previous meeting read and approved.

The following subjects were presented: "Ingrowing Toe-nail," Dr. J. R. Long; "Furuncle," Dr. C. H. Adye; "Carbuncle," Dr. S. C. Long; "Felon," Dr. E. E. Allenbaugh; "Toothache and Extraction," Dr. S. F. Basler, dentist; "Local Anesthesia," Dr. H. G. Weiss.

BOOK REVIEWS

BIER'S HYPEREMIC TREATMENT. By Willy Meyer, M.D., and Prof. Victor Schmieden. The new (2d) edition, enlarged. Bier's Hyperemic Treatment in Surgery, Medicine and all the Specialties: A Manual of Its Practical Application. By Willy Meyer, M.D., Professor of Surgery at the New York Post-Graduate Medical School and Hospital, and Prof. Dr. Victor Schmieden, Assistant to Professor Bier at Berlin University, Germany. Second revised edition. Octavo of 280 pages, illustrated. Philadelphia and London, W. B. Saunders Company, 1909. Cloth, \$3.00 net.

Like all forms of rational therapy put before the profession, Bier's hyperemic treatment deserves thorough and unbiased investigation. In the Meyer-Schmieden book on the subject the methods of application are clearly elucidated, which, with the copious illustrations, should enable the practitioner to easily put them into use. One might have the impression from the text that in the hyperemic treatment we are to find a panacea. However, it is only through accurate and careful guidance in application, such as a work of this kind affords, that the proper place for this method in the medical therapeutics will be recognized and accorded it.

In this second revised edition, there are interspersed some brief histories of interesting cases. An appendix of a more or less complete index of the world literature is given by the authors. The book is arranged in convenient style with paragraphic subjects, given in marginal headings, has clear sizable print, and is practically free from errata.

PROGRESSIVE MEDICINE, Vol. III, September, 1909. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and *Materia Medica* in the Jefferson Medical College of Philadelphia. Octavo, 336 pages, with 37 engravings. Per annum, in four cloth-bound volumes, \$9.00; in paper binding, \$6.00, carriage paid to any address. Lea & Febiger, Philadelphia and York.

This volume is taken up by a discussion by Ewart, of the diseases of the thorax and its viscera, including the heart, lungs and blood-vessels; dermatology and syphilis by Gottheil, obstetrics by Davis and diseases of the nervous system by W. G. Spiller.

Regarding the local tuberculin tests, attention is called to the deductions of Engelbach and Shankland, based upon 6,305 cases, from which they conclude that in adults: 1. The specificity of these reactions has as yet not been demonstrated. 2. The activity or extent of the lesions bears no definite relation to the degree or kind of reaction. 3. The conjunctival reaction is not free from danger."

It is to be regretted that the author does not point out the possible fallacies of Rosenberger's positive blood-findings.

Quite an interesting discussion of comparative dermatology appears in Dr. Gottheil's section.

The section on obstetrics is taken up very largely by a discussion of pregnancy and its complications, and obstetric surgery.

Spiller's review of the recent literature in diseases of the nervous system is quite in keeping with the remainder of this interesting volume.

DISEASES OF THE BONES AND JOINTS. Clinical Studies. By Joel E. Goldthwait, M.D., Charles F. Painter, M.D., Robert B. Osgood, M.D. Octavo, containing 700 pages and 290 original illustrations. Cloth. Price, \$6.00. D. C. Heath & Co., Boston, New York, etc., 1909.

This work is an earnest appeal to the man to whom sufferers from bone and joint trouble first go for advice, to leave no stone unturned for the betterment of such victims, whose main treatment in the past has been a change in diet and the administration of the salicylates or iodids. That each and every one of these cases has a definite etiology and pathology, whether of infectious or non-infectious origin, there can be no doubt; and it is to promoting a more thorough understanding of these primary principles coupled with the citation of clinical illustrations, that the authors' endeavor is made, in order to point the way to a more rational treatment. Because the prognosis as to complete cure is not as good as in some other lesions which are for this reason, perhaps, more interesting to the average medical man, is no reason for not doing the maximum amount in the way of prevention of further deformity and something in the correction of already existing contractures.

Although the authors' experience in the use of vaccine therapy in certain of the infectious types does not seem to have been particularly happy, they are yet hopeful that bacteriology has more in store for chronic bone and joint disease than has as yet been brought out. The description given of the technic of making the opsonic test is radically different from the Wright method in that here use is made of the patient's white cells, whereas in the Wright method the leucocytes are taken from a normal pool and the serum of the patient's blood is tested for the opsonic content. Likewise, Koch's new tuberculin, T. R., is advocated for use in the subcutaneous diagnostic test for tuberculosis, in doses of from one to five milligrams. Doubtless this is likewise an error, the old tuberculin being the product intended.

Taken in all, however, the work has a definite place, and it is to be hoped that it may do something to alleviate the sufferings of those unfortunates who are all too often condemned to a place in the retreats for incurables.

A TREATISE ON THE PRINCIPLES AND PRACTICE OF MEDICINE. By Arthur R. Edwards, M.D., Professor of the Principles and Practice of Medicine and Clinical Medicine in the Northwestern University Medical School, Chicago. New (second) edition, thoroughly revised. Octavo, 1246 pages, with 100 engravings and 21 full-page plates in colors and monochrome. Cloth, \$5.50 net; leather, \$6.50, net. Lea & Febiger, Philadelphia and New York, 1909.

Following the general plan of the arrangement of most texts on Practice of Medicine, Dr. Edwards considers in order the specific infections, diseases of the circulation, respiratory tract, digestive system, kidneys, blood, ductless glands, constitutional diseases, disease of the nervous system, diseases due to animal parasites, intoxications, and sunstroke.

The very extensive domain of internal medicine, with its enormous mass of information, is covered in a systematic way, the important phases of each morbid condition being considered briefly but thoroughly, those of lesser importance but of sufficient bearing to be of interest and help receiving due space.

Since the first edition numerous efforts in medical research have added to the information along the lines of tropical diseases, Flexner's meningitis serum has been put to wider application, Strong has been observing amebic dysentery, evidence has been accumulating in favor of the spirochete as the cause of syphilis, tuberculin is being more extensively used for therapeutic and diagnostic purposes, blood cultures in typhoid and other bacteremias have come into general use, and the recent epidemics of meningitis and poliomyelitis have given opportunity for more exact observation in these diseases. All of these have furnished valuable additions to this edition.

The chapter on Infections of Uncertain Origin includes the rather new mountain fever (tick fever). In the treatment of syphilis by injections, only the soluble salts of mercury are recommended, the insoluble salts are not mentioned. We find no reference to Schaudinn's work in distinguishing pathogenic from non-pathogenic forms of amebæ; nor is there any mention made in the prophylaxis of malaria of the splendid work of Gorgas in the Canal Zone.

Dispersed through the book are some excellent illustrative plates.

TUBERCULOSIS ; A PREVENTABLE AND CURABLE DISEASE. Modern methods for the solution of the tuberculosis problem. By S. Adolphus Knopf, M.D., Professor of Phthisiotherapy at the New York Post-Graduate Medical School and Hospital, etc., New York. Moffatt, Yard & Co., 1909.

Dr. Knopf, who for some time past has been recognized as an authority on tuberculosis, has very cleverly prefaced his little volume with a clear delineation of the various classes of people who are to derive benefit therefrom, and of the various means by which each can aid in the control of the great white plague.

This work is written in a clear, comprehensive style, treating of the problems that confront the patient and the public, and advising how best to meet them and what measures are most suitable to combat them. The various mechanical contrivances which aid so much in the hygiene, particularly the prophylactic treatment, are described and further elucidated by numerous illustrations.

The book is one which may safely be given into the hands of the laity, and will undoubtedly be of great assistance in the education of the public in the present crusade against tuberculosis.

DISORDERS OF THE BLADDER, CLINICAL DIAGNOSIS AND TREATMENT OF, WITH TECHNIQUE OF CYSTOSCOPY. By Follen Cabot, M.D., Professor of Genitourinary Diseases, Post-Graduate Medical School, New York, etc. Illustrated. Pp. 225. Cloth. Price, \$2.00. E. B. Treat & Co., publishers, New York.

This excellent little work on bladder disorders is intended mainly for the general practitioner and contains much that is good on diagnosis and treatment, although exception will be taken by many to the author's statement that the best treatment for vesical calculus is by crushing. The chapters on cystoscopy and ureteral catheterization are timely, though not especially comprehensive. The author does not hesitate to express his preference for the suprapubic route for prostatectomy, and believes it to be the operation of choice in 90 per cent. of cases of hypertrophied prostate, the two-stage operation giving the best results.

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ORIGINAL ARTICLES

THE FOUNDATIONS OF SPECIALISM.*

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LAFAYETTE, IND.

It is very easy to mistake symptoms for causes, a fact not only true in medical practice, but also in our interpretations of social conditions and intellectual achievements. The tendency is so universal that where the conditions are complicated very few perceive the underlying causes. Certainly nothing is more intricate than our modern civilization; nothing more marvelously complex than the interrelations of the new truths that have so wonderfully separated our own age from all preceding ages, giving to it a brilliance and a potentiality unparalleled in the history of humanity. Wherever we turn we are met by triumphs of the intellect. In engineering, in chemistry, in biology, in bacteriology, and medicine, as well as in the more strictly humanitarian studies, man's achievements seem only limited by his daring. These achievements are not merely in the domain of theoretical knowledge, not merely triumphs of pure reason, but reach out as well into the affairs of daily life, showing themselves in a new control and power over the material and over the forces conditioning our material success. Never before has the world seen a time when theory and practice were so yoked together, when the real and the ideal were so intimately blended. Never before has man looked out upon the future so level eyed, with such serene certitude, with such assured expectancy. Great as the triumphs of the past have been, we feel that they are as nothing in comparison with

the conquests of to-morrow. Everywhere men are training themselves or striving to train themselves for their part in this splendid series of intellectual victories. Everywhere also men are placing the same interpretation upon this progress, referring it to a 'symptom,' and in most cases entirely missing the true, underlying causes. The cry is universal that this is the age of specialists, and that it is because of their work, their firm grasp of knowledge that the world is to-day so rich in all that makes life worth living. There is specialism in business, in law, in medicine, in education. The physiological division of labor seems to have been carried to the highest possible degree, and to have been projected into human activities in realms in which a generation ago it would have been deemed to have had no application. You cannot pick up the catalogue of a college or university without seeing that more stress is laid upon the special or elective studies than upon the fundamental and cultural studies. You can scarcely examine a later-day announcement of a professional school without noticing that even there special studies are forcing themselves in and that the claims for the excellency and public esteem of the faculties rest upon the fact that they are composed of eminent specialists. Indeed, almost incredible as it may seem, specialization has found its way into the secondary schools, and our *fin du siecle* high schools have lists of elective and special studies that in their number and scope fairly put to shame the offerings of the older universities. Far be it from me to attempt to contravene the *zeitgeist*, *the spirit of the age*, and be it equally far from me to decry or belittle in the slightest the wonderful contributions to world knowledge that have come to us at the hands of the specialist. But there is danger that out of all this hue and cry concerning specialization, out of this mistaken accentuation, very false notions may arise as to what specialization,

* Read before the Indiana State Medical Association, at Terre Haute, Oct. 7, 1909.

or, to put it concretely, as to what the specialist is. The true specialist, the man who makes positive contributions to knowledge, has certain very definite characteristics which are in the main widely removed from the popular conception. Indeed, the failure of very many ambitious and able young men to rise above mediocrity can be referred with a very fair certainty to this misconception fixed in the formative period. Specialization is really the outgrowth of certain mental characteristics, not something that can be put on or off at will. It is the efflorescence of a long antecedent and orderly growth, not a something that bursts into bloom as Aaron's rod.

The first indication of the specialist in embryo is an attitude of inquiry. We are confronted on every hand by multitudes of alleged facts bearing upon every subject and interest. Part of these alleged facts are apparently true, the greater part, perhaps, as apparently false. So numerous are they that we are actually overwhelmed with facts, and in their presence most of us are helpless. But here and there, there arises a man who with serene front faces this apparent confusion and asks the same question of each, Is it true? A man with no theory to support, without partisanship, anxious only to reach the real heart of the matter. A man not satisfied to use an alleged fact in argument or in generalization, but whose very mental constitution demands facts that are absolutely true, in so far at least as our present methods can detect their falsity or truth. It is only upon such absolute truths that he can rest; it is only upon an accumulation of such ascertained truths that he can advance to generalization and theory. There is somewhat of danger in this mental attitude—it is apt to make one so impatient of authority, of the ready acceptance of half truths, of the willingness to use such half truths in support of theory or generalization as to produce an inability to fairly judge the work of honest men of different mental attitude. But despite this danger, every great specialist has had in a marked degree this spirit of inquiry, leading him to question all things, not in a spirit of iconoclasm, but because of a positive hunger and thirst after truth. It is perhaps best expressed as the attitude of honest doubt. Darwin well illustrates it in his studies concerning the distribution of land plants. In the study he found in many cases identical plants on continents separated by wide stretches of ocean. He found plants upon isolated oceanic islands identical with those upon continents hundreds of miles away. Rejecting Forbe's notion of continental extensions as untenable, he referred the condition to "occasional means of transportation," naming

among these the carrying of seeds by ocean currents. Immediately he was assailed by the statement from botanists that the seeds of land plants were killed when submerged in sea water. Even Sir Joseph Hooker, the greatest of English botanists, told him that his idea was absurd, that the fact that the seeds of land plants were killed by sea water had been common knowledge for centuries. But Mr. Darwin possessed in a high degree the attitude of inquiry. He neither denied nor affirmed, he experimented, and as a result proved that the seeds of the majority of land plants were uninjured by the action of sea water, an immunity extending in some cases for over one hundred days. Incidentally he showed that the seeds of the bean faintly did not possess this resistance to sea water, and a study of various island floras showed that one of their most striking features was the absence of representatives of this great and widely diffused family. At almost every onward step of Darwin or of Pasteur there was necessity for pause to clear away obstructions built up by alleged facts. Obstructions which to men of different mental constitution would have been absolutely insurmountable.

A second sign of the specialist is breadth of interest. Goethe voiced an eternal truth when he said. "You cannot build a palace upon the foundations of a hut." Great achievement never has, never will, never can rest upon either a narrow or incomplete foundation. No error is more common to-day than to imagine that specialization is a process of elimination, a cutting out of all subjects save the special one in hand, and upon that one subject concentrating all interest and all effort. No mistake could be a greater barrier to progress, none more fatal to real achievement. But everywhere there is required constant effort and insistence to prevent this narrowing process which can but result in failure. The cry of the old philosopher, "*Humani nihil alieni,*" is changed by the modern scientist to *Veritatis nihil alieni*. It was Pasteur, the chemist, who made stereotomy possible; Pasteur, the botanist, who saved the vineyards; Pasteur, the zoologist, who protected the flocks of France; Pasteur, the bacteriologist, who confounded the heterogenists, and Pasteur, the practical, who, defying the conservatism of his time, made serum therapy possible and earned as his rightful title that so gratefully given him, *benefactor of humanity*. As chemist his attitude of inquiry especially fitted him for his investigations in other fields, and the chemist was transformed into the botanist, the zoologist, the bacteriologist, the physician, simply because of this breadth of interest which is never absent in those who achieve great things. What-

ever he touched he illuminated, because this attitude of inquiry made him unwilling to rest upon other than demonstrated truth, and he was great in all that he did because his breadth of interest gave to him a vast wealth of knowledge so exact, so complete that his every utterance was authoritative.

Darwin, the geologist, was in constant correspondence with Lyell and other leaders of geographic thought; Darwin, the botanist, was in closest touch with Hooker and Gray and the botanists of Germany and France; as a zoologist he was the peer of any of his generation. He was in constant correspondence with stock breeders and pigeon fanciers; with horticulturists and florists; he discussed evolutionary theories with Haeckel and Wallace and Huxley; he debated with Mueller as to the origin of language; he conducted countless series of experiments in physiological botany, made dissection after dissection upon animal forms, traced homologies, wrote monographs, geological, zoological and botanical, advanced far-reaching theories touching almost every branch of intellectual endeavor; in all was great; in many supreme. Why? Because of breadth of interest and because out of the vast accumulation of demonstrated truth thus brought under his control he was able to see significances when most men saw either nothing or inexplicable phenomena; to trace interrelations which were impossible to men of lesser knowledge. No foundation can be too broad, too deep, too strong for the specialist who is to solve the problems still confronting us. I become more and more convinced as the years pass that the great danger in modern methods, in modern ideals, lies in the failure to realize the almost infinite importance of breadth of interest, for nothing else can bring breadth of knowledge and fine achievement. In your own experience you have never heard a lecture from a great specialist in which you have not been amazed at the breadth of his knowledge. It came from breadth of interest, and the masterful grasp of his special subject was but its natural fruitage. Weissman says in one of his essays, "Genius will always find a gateway," and the man with an attitude of inquiry and with broad interest will always be a leader in his chosen line. Indeed, leadership, masterfulness seems to come in no other way.

Another characteristic of the true specialist is exactness, an exactness passing into absolute certainty and extending even to the minutest details of the matter in hand. I said a moment ago that when you listened to a great specialist you were impressed by the breadth of his knowledge, the wealth of his illustration, his familiarity with

the literature of his subject. You were perhaps impressed more deeply by the exactness, the crystal clearness of knowledge, bearing upon the minutest detail of his subject. An exactness such as this enabled Pasteur to say, "What is true in the laboratory must be true in the field," and, resting in this certainty of the accuracy and completeness of his work in the laboratory, to leave himself no possible loophole of escape, no ground for explanation in case of failure in his crucial inoculation experiments touching anthrax. In our own time we are impatient of details, of minutiae; eager for the great things, the spectacular; anxious for the achievement that will bring us before the footlights in the center of the stage. But the life of every great contributor to the knowledge of the world tells us that without this exactness, this close attention to detail, achievement, at least worthy achievement, is impossible. It enables us in some degree to understand our own littleness when we think of the hundreds upon hundreds of experiments of Pasteur in his studies bearing upon *rabies*; the repetition over and over again of the same hundreds upon hundreds of experiments; the almost agonizing endeavors to eliminate errors, and then the testing and retesting upon various animal forms, until at last after years of effort a splendid success—the only natural outcome of such exactness, such compelling accuracy—crowned his labors.

It requires neither a prophet nor the son of a prophet to forecast the future of a man habitually inexact and inaccurate either in method or in statement. And we, if we rise out of the commonplace, must have somewhere, somehow, acquired the habit of exactness and accuracy, so definitely and so firmly, that inaccuracy is impossible. It was Darwin who said in one of his letters, "The inaccuracy of the majority of observers is perfectly astounding; there is scarcely one in a hundred upon whom you can rely." Many of us, I imagine, must refer our comparatively insignificant achievements, not to lack of opportunity, but to a mental habit satisfied with an approximate truth, instead of being possessed with a veritably consuming passion for the exact truth. And this exactness must run out into the most minute details. To the true specialist nothing is too minute to escape inquiry, nothing so small as to be without possible significance, and thus to him, atom and universe appeal with equal force. Humanity awaited the coming of Louis Pasteur for the full revelation of the enormous significance of the infinitesimally small, and when the revelation came it brought to us new possibilities, new courage, new hope. The mind so con-

stituted that it is careless of the most minute detail is not the mind of a specialist, nor from such soil can the fair flowers of specialism arise. It is another criterion for judging our own possibilities, for casting our own horoscope. It may be true, as I have heard it stated, that there are lines of work in which there constantly exist "negligible errors," errors so slight that their bearing upon the general result may be left out of account; but such is not the case in the problems with which you are to deal, and such is not the case in any of the really great problems for the solution of which the world is so eagerly waiting. Thus to his attitude of inquiry, and to his breadth of interest, the true specialist adds exactness in everything that he does and says, for to him a fact is such a precious thing that it is not to be handled lightly. His facts are bone of his bone, flesh of his flesh, his by sweat of blood, and, knowing their value, he deals with them as sacred things.

The ability to work patiently and continuously is another of the hall marks of the true specialist. The young lawyer who asked the great chief justice of England the secret of his success received for answer, "My ability to live like a hermit and work like a horse." When Cecil was asked if he could explain the genius of Sir Walter Raleigh, he replied: "I know not in what his genius consists; I only know that he can toil terribly." Darwin, in one of his letters to Sir Joseph Hooker, writes: "If we except fools, I am more and more convinced that there is no real difference between men except the ability to work. The ability to work effectively is what we call talent and genius." It is told of Pasteur that all of his holidays were spent in libraries saturating himself with the lives of the great workers of earlier times. That mass and intricacy of work seemed rather to stimulate than to dishearten, and that after the failure of a long-continued series of experiments, he would recommence the work with all the eagerness and enthusiasm of his first attack. Indeed, both in his case and that of Darwin, the more difficult the task the more recondite and intricate the problem, the more annoying the mechanical difficulties—by that much were they the more eager in carrying it to a triumphant conclusion. This ability for painstaking, persistent work is one of the rarest of characteristics. I speak with some knowledge of the facts, not only in respect to the young fitting themselves for life's work, but also in respect to those engaged in training the young. Very rarely do we find an eager search for some worthy problem, difficult of solution, and a joyful settling down to the planning and executing of the work involved in its

solution; work which under the most favorable conditions must extend over months, perhaps years. Far more frequent is the selection of some fairly simple problem, the solution of which, if not of the highest value, is at least in the highest degree spectacular. A tendency to generalize from insufficient data and to announce these generalizations to an eager and expectant public as positive contributions to knowledge. Every branch of knowledge, and none more than medicine, has a host of such active but superficial workers, who have a temporary notoriety, achieve a certain measure of success and pass away, leaving their imperfect work to be cleared away by those who follow. Militating against patient work is the eagerness, almost the mania, for an immediate success or an immediate prominence, factitious though it be. Most of us who have reached middle age must in this respect cry *peccavi*, but some of us have repented and I hope found forgiveness. No really valuable truth has ever come to us that was not born out of an equally great labor. The labor carries with it also a certain necessary self-sacrifice—the weariness of the struggle is all for the worker, the resultant truth is the common property of all. Many a man who has wrought most magnificently for his fellow-man has been ridiculed and scorned and reviled as the veriest visionary or as a profane iconoclast. The bitterness of mankind toward its benefactors is one of the profound mysteries. What I wish to emphasize, however, is the fact that the true specialist possesses this ability to toil terribly, that in every case it has become so fixed a habit that he actually finds his recreation in his work, his weariness is his rest. It is perhaps well for the world in the main that it be filled with commonplace people. You remember Carlyle once said: "England is made up of thirty millions of people, chiefly fools." We do not go so far, but we do know that of our ninety millions of people the great majority are commonplace as regards worthy achievement. Out from this level of commonplaceness we will never emerge save by the roadway of painstaking, persistent toil, and along this highway every true specialist travels.

The specialist—and that to-day is but a synonym for the successful man—has some clear notions as to what constitutes proof. A prevailing intellectual weakness from which many never escape is the inability to perceive a non sequitur. We laugh in conscious superiority at some of the fallacies that used to puzzle us in the days when logic was a part of every college course. Light is contrary to darkness: feathers are light, therefore feathers are contrary to darkness: no longer troubles us, but many of our conclusions, indeed

many of our most profound beliefs, are drawn from premises fully as fallacious. Large business enterprises are organized and vast sums of money squandered, not occasionally, but continually, in every state of the Union because of this absence of a clear conception of what constitutes proof. Primarily, this conception depends upon a wide range of facts and conditions, and a knowledge of the dependence within certain limits of the facts upon the conditions. None save those who have attempted to prove some definite thesis can have any conception of the extreme difficulty of proving even the most simple proposition. Try it once in the rash ebullience of youth and see how quickly from every quarter will spring up observers who will deny your facts, logicians who will question your argument, critics who will cite you to the work of others along the same line and incidentally furnish you a host of objections to bring under your proof. You will then begin to appreciate the fact that in addition to a mass of facts which are yours at first hand, you must have a knowledge that does not end with the ability to cite volume and page, but a knowledge of content sufficient to weigh and balance, to compare and contrast, and sufficient, finally, out of the mass of observed facts and the mass of digested literature, to form some definite, clean-cut conclusion based upon equally definite and clean-cut proofs. The most difficult mental habit to acquire is this analytic bibliographic habit, and there is no brake so greatly retarding the car of science as its absence. Huxley once wrote of one of his confrères, "One thing is evident, the man cannot reason," and the same verdict could be justly passed upon many a lecturer or book-maker of to-day, if judged merely by his lectures or books. So common is this inability to recognize what constitutes proof that in many cases the world seems to have been governed by unreason, rather than reason. It was solemnly urged against the sphericity of the earth that it was impossible, indeed it was profane to assert it, for if the earth were round Christ would have had to appear twice and to have suffered twice—once for each side of the world, or there must have been a dual Christ; and this was held by all men in all places and in all times until after the revival of learning; held in spite of the fact that the shadow of the earth upon the moon always was limited by a curved line, and that no solid save a sphere cast such a shadow. That was centuries ago indeed, but in the last century upon the discovery of anesthetics tremendous argument was made against their use, especially in maternity cases because in a certain degree they served to ameliorate the pain entailed upon humanity by the primeval curse. So

fiercely was the argument urged that the outcome was doubtful until one absurdity was balanced over against another. A shrewd physician called attention to the fact that the first surgical operation upon record was the removal of a rib from Adam, and that this took place when Adam was in a deep sleep, which argument proved that the Lord not merely approved, but used anesthesia. From the moment of the advancement of that absurdity, all opposition ceased; it had been proved to the general satisfaction that the utilization of this magnificent discovery was permissible. Nothing is more characteristic of the mind of the specialist than this clear-cut conception of what constitutes proof; nothing is more needed by men and women of every class to give certitude of action. The panaceas and nostrums and "cure-alls" that occupy so much space in the advertising columns of our public press bear constant testimony to the persistence of the age of unreason, to the rarity of a real appreciation of what constitutes proof.

Perhaps most characteristic of all traits of the specialist is his possession of initiative. He recognizes instinctively investigations that promise much in explanation of important questions and in these investigations he uncovers his own problems, devises his own methods. He travels a path before untrod, his work is that of the pioneer—breaking a way through the dense undergrowth of the forests, and leaving a trail which others may follow with greater rapidity, with less expenditure of effort, which they may indeed make broader and more easy for successive generations. In every specialist worthy of the name there is the spirit of the pioneer, the passion to break new paths to new fields. This initiative is comparatively rare; there are scores who follow well in beaten paths; who accumulate facts along recognized lines; who develop a refined technic by means of which much new knowledge of details may be gained, where there is one who finds his own problem, discovers his own methods and gives to the world a new truth. The first sign of this initiative lies in the recognition of the fact that unsolved problems, problems which as yet have baffled the skill of investigators, do actually exist, and in the effort to formulate them in some fairly definite shape. Most of us fail utterly to recognize the problem and fail with equal completeness when it is perceived, to grasp it so clearly that we see intuitively every fact that may lead to its solution. It took the world a long time to see the existence of any problem in disease. Assuming it to be caused by demoniacal possession or visitation of Providence, men regarded the observed facts as unrelated and inexplicable phenomena.

At last, however, the man who could see a problem arose, and by using the facts already observed and by devising new methods of attack, gave us our modern notions of the causation of disease. In its last analysis, initiative is the legitimate offspring of the attitude of inquiry and a clear conception of what constitutes proof, and with these as indications the teacher may feel relatively sure of developing in time this initiative, which is the supreme characteristic of the true specialist, whatever may be his work.

Last of all, and in a certain sense most important of all, is *vision*, for vision always precedes achievement. Before his mighty empire was welded together, it was necessary that Charlemagne should have the vision of the Holy Roman Empire of the West. Before the crusades were possible, Peter the Hermit had the vision of the tomb of the Christ reclaimed from infidel hands, and so to Joan d'Arc, and so in every realm of achievement. The true specialist dreams and sees visions—visions of fine achievement, of worthy work. Of work meaning much for himself, but meaning much more for humanity. Work, the accomplishment of which will give to men and women everywhere, more of comfort, more of hope, more of aspiration. To some definite task he directs all of his power steadily, persistently, without impatience. Nothing can turn him from his self-appointed task. Not ill health certainly, for Pasteur worked for twenty-five years after a paralytic stroke, and Darwin was so enfeebled by sickness that at best he could work but two or three hours a day. Not a popular ridicule or lack of recognition. When Moore of this state began his botanical studies he specialized in the marine algae, a subject apparently as far remote from human interest and practical life as possible. It is possible that some persons may have pitied the young man who had chosen to spend his strength upon a subject of such little value. But later, when the government wished a great problem solved, the restoration of exhausted soils, it was Moore—the student of algae who solved it and gave to the world one of the most valuable and practical discoveries of modern science—the method of soil inoculation. It was this same Moore also who solved a specially intricate problem concerning the purification of drinking water. Why? Because he stands as a fine type of the true specialist, and in his study of the algae he had attacked a definite problem with a patience, a persistence, and an initiative that gave him equal mastery in any subject he undertook. The most determinative factor, a factor almost absolutely controlling the future in any life, is its ideal. For toward this ideal we strive with an intensity proportioned to

its clearness, and this ideal in greater or less fashion we somewhat realize. Pasteur, as he tells us himself, longed that he might so work, that after he was gone, men would speak of him as a benefactor of humanity, and every one of his fifty years crowded with work showed some great contribution to knowledge, many of which have proved of inestimable value to mankind. Before his death he received from the whole world the title which had been the impelling ideal to the attainment of which all of his titanic labors were directed. No man with low ideals ever achieved great ideals.

True specialism has its foundations in certain mental habits, and some of these can only be acquired by infinite toil. It is not an eliminative process; it is the result of far-reaching cumulative processes. The true specialist is the man who sees clearly and broadly, works with exactness and patience, and who, when confronted with "no thoroughfare," breaks new paths. The man able to test his own work and the work of others. In brief, the observing, reasoning, working man of high purpose—the noblest product of the ages.

DISCUSSION.

DR. GEORGE F. KEIPER, Lafayette: At a meeting of physicians one speaker said:

"The rage for parceling out the human frame into special territories is passing all bounds. We have specialists for the nose, the throat, the ear, the lungs, the heart, the genitourinary organs, the rectum, the mouth, the brain, etc. It seems to me, gentlemen, that it will not be long ere the specialist, like Alexander, will have to sigh for new regions to overcome. So far as I can see the umbilicus is about the only portion of the human body not allotted to a specialist." Whereupon a veteran practitioner, raising his hand, exclaimed: "Doctor, you are forgetting the naval surgeons.—*Chicago Medical Recorder*.

Several years ago our medical journals were fairly alive with articles like the above on the dangers of specialism. Dire predictions were made as to the welfare of the general practitioner, who had found it necessary to send his rectal cases to the proctologist, his genitourinary cases to the genitourinary surgeon, his nervous cases to the neurologist, his mental cases to the psychiatrist, his women with the diseases peculiar to their sex to the gynecologist, his throat cases to the laryngologist, his ear cases to the otologist, his eye cases to the oculist, and so on, until it seemed that the old family physician must himself become a specialist in all these troubles or become a mere directory to the specialists. But even he has become wise in his day and generation, for he has become the internist, a specialist in internal medicine, and all is serene again upon the formerly troubled waters of scientific medicine. And we

have learned that "it is not a sign of strength, but of weakness, if a practitioner, misguided by a false sense of shame, obstinately refuses to recognize that he has arrived at the end of his powers, and if with equal obstinacy he refuses to let his patients have the benefit of advice in conjunction with himself."

At that time also appeared the satirist, and he dreamed a dream of his experience as a specialist, for he had finally selected habitual constipation as his specialty.¹

But laying all humor aside, we must agree with Herbert Spencer when he writes: "From the remotest past which science can fathom, up to the novelties of yesterday, an essential trait of evolution has been the transformation of the homogeneous into the heterogeneous." And this is the basis of all specialism outside as well as inside the practice of medicine. We are told that in the former civilization, each Indian did all that individual Indians did. It was not long that Indians found that one of their tribe could make better arrow heads than any other one. So the arrow-head business was turned over to him. One Indian was found who could make better bows than others, and the bow business drifted into his hands and the others brought to these their sustenance to trade for bows and arrows. They became specialists; and from this crude beginning we may trace the subdivision of labor to the present time. There was a time when the same professor taught anatomy and physiology. Now such an idea would be scoffed. Even the chair of anatomy has been cut up and made over into several chairs and filled by as many teachers. The chair of obstetrics and gynecology has suffered like fate, and at least two chairs take the place of the one.

Since the days of AEsculapius the most prominent contributors to medicine have been those who devoted their time and energies to a particular branch of medicine, as anatomy, physiology, proctology, *materia medica* or surgery.

Quincke² observes that "the multiplication of specialties is the result of public demand. What is wanted of a medical man is the fullest qualifications, and with the growth of medical science and with the widening of our knowledge it becomes more and more difficult to satisfy the public in this regard. It is perfectly natural, therefore, that we have specialists in major surgery, psychiatry, ophthalmology, otology, genitourinary surgery, etc." Quincke makes the further observation that, on the whole, it takes less study, diligence and natural endowments to make a good specialist than to make a good general practi-

titioner. This may be comforting to the general practitioner, but I am inclined to dispute the statement as prejudiced. If the specialist gives himself up to the task of keeping strictly up to date in all the other lines of medicine, not in detail, however, he will be kept quite busy, thank you. For the specialist should be the general practitioner, who by force of circumstances limits his practice to his chosen field of work and endeavor.

Specialism is as old as medicine itself. "In the days of the Father of medicine we find surgeons for the armies, midwives or naval cutters, dentists, oculists, lithotomists," and they had free clinics, too. In the days of the Alexandrian school, a man had to have thirty doctors, one for each ailment from which he might be suffering.

In the highest civilization known to ancient times, and as the result of that civilization in Rome under the Empire, according to Baas, "there were oculists, aurists, surgeons, dentists, uroscopists, specialists in bleeding, catheterization and clysterization, herb doctors, milk doctors, gynecologists, movement cures, specialists in private diseases, and for the cure of fistulas, hair doctors, urine doctors and hernia doctors." From this we see that osteopathy and gynecology are not so new after all. The ancient Romans knew all about them.

The Egyptians had their soothsayers and pastaphoria; the Persians their genii; the Phoenicians their cabari; the Hindustanee their vadyas; the Tartars their shanans; the Scythians their enaries; the Zulus their rain doctors and tuwalas. The latter were probably as successful in bringing rain to the parched earth as were the modern rain doctors of a few years ago.

The middle ages had their doctors of worms, stone-cutters and oculists. In fact, the separation of medicine and surgery is due to the great Italian universities of those times. Early in the eighteenth century Morgagni, the pupil of Val Salva, brought into existence the science of pathologic anatomy, a special branch of anatomy in general. Then the special science of chemistry took the place of alchemy. Biology, histology, pathology and the youngest child of biology, bacteriology, were developed by men and women who specialized in those fields.

Abdominal surgery began in 1809 with McDowell of Kentucky. "Then obstetrics went off and married surgery and they brought forth gynecology." Time forbids to trace the origin of the other specialties, simply to say, that as the specialism of the high civilization of ancient Rome was the product of that civilization, so in the present higher civilization and most enlight-

1. Jour. A. M. A., March 3, 1894.

2. Munchen. med. Wochenschr., June 19-26, 1906.

ened age, the like of which in culture and progress the world to date has never seen, we are not surprised at the refinements of the subdivisions of medicine into more numerous specialties than existed in the Golden Age of Rome.

At the present time it is impossible for any physician to read all the books published each year in America alone. If you will take the trouble to turn to page 52 of the *Journal of the American Medical Association* for January, 1905, you will find that for the year 1904 there were published three new works on anatomy, three on bacteriology, twelve on urinary analysis, five on diagnosis, five on genitourinary diseases (and venereal), two on histology, ten on hygiene, two on laryngology, fifteen on materia medica, pharmacology and therapeutics, eight miscellaneous, fourteen on nervous and mental diseases, five on obstetrics and gynecology, eleven on ophthalmology, five on pathology, six on pediatrics, ten on physiology and embryology, eighteen on the practice of medicine, and twenty-one on surgery, a total of 153, and the list is admitted to be incomplete. The succeeding years have certainly shown no diminution, though similar statistics are not available for these years. This does not include the literature appearing in the 300 medical journals of the world. Alone in ophthalmology and otology the output is 25,000 pages per year. No wonder some conscientiously limit their practices to these subjects.

We have hinted that specialism is not confined to medicine alone. All education has long been and is specialized. James A. Garfield once said a university would be created by placing a boy on one end of a log and Mark Hopkins on the other. But universities are not built up in that fashion nowadays. Therein the necessity for specialism is becoming more and more apparent. Take chemistry, for example. One professor does not any more attempt to teach all branches of chemistry. The well-developed school has a man for qualitative and quantitative analysis—one for organic chemistry, one for physiologic chemistry, one for urinary analysis, one for toxicology, etc., etc. One man was formerly professor of science, but now how finely subdivided is the former chair of science.

But when we get outside of medicine and teaching, the specialism of trade is even more marked. Time was when a man made a pair of shoes entire. But that has all changed. Many men now make a pair of shoes, each having a part in building up that pair.

Time was when one carpenter made all that may be committed to twenty to do to-day, in

building up more perfectly and vastly easier what one man laboriously did before.

The more we learn, the more we find there is yet to learn about things we as yet know nothing. New discoveries are not to be made except as we give ourselves to special problems yet unsolved. This is the justification for the specialist, and the specialist in medicine, and one of the foundations upon which rests specialism, in general.

Let us take the motto of the late Dr. Senn as our own: "Often he expressed the desire that he might be able to contribute something to the up-building of medical science." And to that end his watchword was: "Work, uninterrupted, hard, faithful, honest work." When we have become investigators as well as applicators of therapeutics, specialism will be founded upon a saner basis than it is at present.

I am in thorough accord with Shambaugh of Chicago, when he writes: "A specialist in the highest sense of that idea cannot be made in a postgraduate school in four or five weeks." Irreparable damage has been done the profession and the public by the postgraduate medical school as it now exists. The preparation of a specialist should be begun in the college from which our would-be specialist should graduate with the academic degree, having taken such subjects as will best fit him for the medical curriculum. More than ever are we becoming convinced that the best medical college is the one which is the medical department of a great university. The spirit of our great universities in their teachings of science in general is the same spirit that is needed in the science of medicine and surgery. After receiving the degree of Doctor of Medicine, the goal should be the degree of Ph.D. in surgery, ophthalmology, psychiatry or any of the other branches of medicine. With one pursuing the full college course as a preparation for the degree of Doctor of Medicine, the course of medical study may well be shortened to three years, with a compulsory year of hospital service. Then the degree of Ph.D. may take another year to attain.

As to the relationship of specialism to general medicine, we must not forget that that relationship should always be regarded as close as mother to daughter. For all specialties in medicine are the legitimate progeny of General Medicine, and that specialist and general practitioner are wise if they never lose sight of that fact.

DR. F. B. WYNN, Indianapolis:—I do not want to appear before this audience in the light of a critical specialist. I am quite willing to admit that this is the age of specialism, and, in fact,

most of the triumphs of this age are due to specialism—in electricity, which is manifested in such multitudinous ways, in the advancement in agricultural pursuits, and many other things. But for the specialists we would not have the fast horses that Terre Haute is famous for, and in medicine specialism has given us great blessings. The greatest triumphs are along the line of specialism, whether in pathology, in bacteriology, it matters not; specialism in medicine in the last decade or two has contributed more than aught else to the advancement of medicine. On the other hand, there is a thought of evil in specialism, and Dr. Coulter has to-day in his beautiful and eloquent manner presented to us that fact, that the specialist is apt to become narrow minded, and he exhorts us to become broad specialists. I think in medicine we are very prone indeed, to forget when we come to consider an eye, or some other special organ of the body, that we are dealing, after all, with a man, a man who has a temperament, a mental organization, perhaps a moral side that must be dealt with. I like to think of a man, whether a specialist or a general practitioner, as a tripartite being with a mental, a moral and a physical side, and so if we take a man in that tripartite sense we are capable of dealing with the whole organism; we are not narrow. Now I want to give an illustration from our own profession and show you an example of a man who, it seems to me, is a great specialist. If we search American medicine it would be difficult to find a better man. And I have in mind a man whom you all know and have seen. What is the basis of the triumph of the Mayos? I think about nine out of ten will say it is because they have been operating and operating along in their particular narrow field, and there they are great men. I do not believe a word of it. It has been my privilege to study these men. I have had a chance to see the breadth of the men, particularly Charlie. I will tell you that when he came to the meeting of the American Medical Association at Atlantic City he came to the pathological exhibit of which I was in charge four different times, and he would bring his friends, and he would say about a specimen, "Is not that beautiful? Is not that wonderful?" And so he would make the rounds, himself though not a pathologist, yet he was studying pathology all the time. He brought his friend Lane, of London, and they looked at the tuberculosis exhibit and talked about the opportunities and needs of the American Medical Association along sanitary lines—that we ought to broaden out in this field. And so he came back time after time. And was that in his field of work, operating and operating all the time? Not at all. What do they have in their hospital? They have great pathologists. They have fine men, very competent men, and they have great

internists who are very, very competent men. They lay deep the foundations for specialism. It is not because they are operating on so many cases. It is because they are seeking the light from whatever source they can obtain it. And I want to tell you another instance. When Dr. Charlie started to leave the exhibit he said, "Come here, Wynn; I want to whisper something in your ear. I have always been a dreamer." Just like Dr. Coulter said. "I have always seen pictures of things that I want to do up there in Rochester. I want to see McCarty and stimulate him. He is a good man. I am going to send you a lot of stuff next year. You encourage them. I want to see this sanitary business grow in the American Medical Association. I have achieved in surgery, but I want to see these larger things grow." And there you have the broad specialist.

DR. A. W. BRAYTON, Indianapolis:—Thirty-one years ago I made an address on a similar subject before a body of specialists—educators may be regarded as such—in which I contended for special education along the lines of natural history teaching, and I was pleased to find that Professor Coulter had been appointed to discuss the paper. Of course, he supported my contention, for it was right, and we have been in touch ever since. There are admirable features in his presentation and the largeness and scope and wide reach of it made it applicable to any association of students along any of the lines of human research. I do not think he would have varied it very much had he been giving it in the Academy of Sciences or to a group of theologians. He had gotten beyond the presentation of it in the limited sense, if I may say so, in which it was presented by Dr. Keiper, as touching particularly our profession, or even the fine work that Dr. Wynn has done in the American Medical Association in pathology, and the great interest and value that has attached to that work. I do not think, however, that it is possible for all of us to be specialists. The heroes, the inventors and poets, the great men that have been the leaders of the world, are very few. We can read their history in a very small book, but they are the ones that the rest of us follow. I have known a few such men. They are the men that William James had in mind when he said it was the function of a college or university to bring young men in contact with the greatest minds. It was not what they studied; it was the men they met and got acquainted with and who influenced them in college. But inasmuch as the great men are those of history and of literature in the past as well as in the present he, of course, included, comparatively, a knowledge of the great men we read of in literature, in history, those that have been the movers of the world. That is to say, he brought culture back to the old definition, the knowledge of the best

that has been thought and studied in the world. For the great mass of us must study these things, but not many have created. But I do not think the great body of men can be made successful specialists, and therefore I take the ground that the old method of generalism in education had its virtues, and that they have been in a degree and manner overwhelmed by the new method that has swept through the country, particularly the United States, by the introduction of elective courses in Harvard by President Eliot. How many of the small colleges in the West have suffered by the effort to have specialists in eight or ten departments, getting mediocre men to head their departments and not paying sufficient salaries to attract the best men. Our great institution to the south of us is suffering from this trouble at the present time, though they can point to the great men that have gone away from them. But on account of the immense number of interests that have undertaken to keep specialists to look to them for great leaders in education is fanciful and more is to be hoped and expected from the idea that the object of education is in the generalities. I do not mean mathematics and languages, and so on; that is good, and there was discipline in it; but the old colleges we had in Indiana, Hanover, the Mother of Colleges, where our speaker and his brother were educated, Depauw, where Dr. Wynn came from, were, I think, doing better work for the students than the great collection of buildings and students that we call universities now. I have said I have known some of these great men. I want to speak of some of them. Of President Jordan, who has made a classification of fishes and has added his name to over one thousand of them. At the same time he has been at the head of a great university for twenty-five years, and managed it well, and he has been, next to Eliot, a great influence in education in this country. You know he established the measure to keep us from specializing too much, and, in addition to that, he has always been the adviser of kings, a great author and a great moral force in the world. We have got to have the man first. I saw a surgeon stand before a body of students and do six operations in one forenoon, and when he got through he held up his hands and advised the boys to be specialists. He said, "Do not be a minnow, be a whale." Now, we cannot all be whales. A lot of us medical men have got to be minnows to feed the whale when he comes. He has got to be born a man. It must be in the blood, and then he may achieve great things.

DR. WORRELL, Terre Haute:—One phase of specialism has not been taken up that I would like to hear discussed. Specialism as defined and characterized by Professor Coulter is the one that we regard as the true one, the true specialist; but specialism as we have it in the practice of medicine, that we think of when we refer to

specialism, is not the specialism described in Dr. Coulter's paper. Specialism, it is true, has done much to bring surgery to its present point, but specialism as we know it in practice is a false specialism; it is a prostitution of the word specialism, and, as I am familiar with it, is an outrage upon humanity and upon the profession. Our streets are full of signs of specialists, men who have come directly from our medical colleges, from Indianapolis, from Chicago, that have gone through the ordinary curriculum and have had perhaps six weeks of teaching in some specialty. They immediately select the area in which they are going to operate and put out their announcement as specialists. Now specialism in the minds of the public is simply the recognition of the fact that under normal circumstances the specialist is a better qualified man than the one who devotes his time to general medicine, and hence when a man announces himself as a specialist he assumes responsibility and claims to have a higher degree of skill than our law requires. Our law requires that a man shall give a reasonable amount of skill, and when it comes to a matter of litigation his responsibility is determined by that fact, and when a man announces that he has higher ability and has thus attracted the people to him, and he is not able to render the service he has claimed he is able to render, he has committed a crime on the community, and the profession is responsible for allowing him to go on. Specialism is a recent development. Our laws and our examination boards have not recognized that fact, and we still permit men to assume responsibilities as specialists upon examinations which they pass at their colleges. Now we ought to require that the man who announces himself as a specialist should have a higher education than the ordinary graduate. Really he ought to be required to practice a certain number of years, or pass an examination before a properly constituted board.

PROF. STANLEY COULTER, Lafayette (closing):—I only wish to thank the members for the courtesy with which they received the paper. I might say its text was originally a young man whom I had known. He was a very indifferent student in a two years' course in pharmacy, and he was passed through with difficulty. Then he took four years at a medical college and returned to his native city as a specialist in the modern limited sense. Now as an educator I thought I had a duty to perform, and I tried to discuss the subject without manuscript at Cornell and later I gave it at the Indiana Medical College. This is a rather unsuccessful attempt to reduce it to writing. I was trying to discriminate between the real specialist, who reached specialism through the process of selection and broad knowledge, and the pseudospecialist who has reached specialism through a process of elimination, and who is a menace to society and a disgrace to your profession.

SOME POINTS IN THE ANALYSIS OF PSYCHOTHERAPY

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Contemplation of the past with all its revelations concerning the human body, the physiology and the ills besetting it, the wonderful progress made in pathological investigations and the ascertained causes of perverted functions, with the various remarkable surgical and medical methods found for relief, leads with its egotistical tendencies away from thoughts of the future and the immense amount that is yet to be discovered. Somewhat blinded by these past glories we have been inclined to refuse the possibility of achievements in overcoming disease along other lines.

Yet to-day there exist many theories for the treatment of disease, each with its line of argument and mass of statistics. There must be some truth in it somewhere. The layman is of necessity somewhat confused by the discord and variance of those treating diseases. The jarrings and discords diminish the dignity and respect that naturally ought to attend such a profession. Let abuse and denial cease until investigation reveals the truth. If there is no truth in psychotherapy, careful study will soon reveal its worthlessness and it may be branded with the reasons therefor.

We find some form of psychic treatment running through the ages, appearing at times under different guises with renewed vigor, but always with the original elements at play. Charms, incantations, spells and amulets are the oldest form of treatment known. The driving out of demons and the appeal to gods is as old as history. That old physician, Esculapius, relied upon the son of Apollo to cure his patients by means now recognized as hypnotism. The touch of priests, the king's-touch, the touch of sacred relies and visits to sacred places have always been a means of cure. Even as late as 1865 the king of Italy secured results by touching his subjects during an epidemic of cholera. The various shrines exist to-day and are the source of many pilgrimages of intelligent people. A visit to the shrine of St. Anne de Beaupre, near Quebec, must convince the most skeptical that results are secured. Great names of history are closely linked with these various cures, many of these men having given us laws and other facts that are readily accepted. It was an easy though necessary step from the external to the internal source of cure. Dried mummies, tiger's teeth, holy waters, and all sorts of curious substances have been used as ingredients of medicine. Not long ago I found a patient with spotted fever wrapped in the fresh

hide of a spotted coach dog. The various obnoxious ingredients sometimes used in the modern poultice are not devoid of psychotherapeutic inference. The subject is anything but new, though recently presented in different guises.

It is to be hoped that physicians will now take up the matter, give it serious consideration and place it upon its proper scientific basis. This basis must, of necessity, rest upon a thorough understanding of the working of the mind and the physical changes in the cells which occur. Physicians use automobiles to facilitate their work. They guide them to go where they desire when the machinery is working properly. But something happens. How helpless he is unless he understands the working parts and knows where the energy comes from and how it is applied. If he does not know where to look, he just keeps on cranking and hoping. Unfortunately psychology has not yet approached the stage of an exact science. There is still doubt and diversity of opinion. However, there are many facts and practical theories that help to solve the psychological problems. The mind is concerned with the whole body and its functions, its purpose being to receive stimuli either from the outside by means of the special senses or from within by means of the efferent nerve fibers and to make the proper adaptation therefor.

This comparatively simple purpose is a very complex process, many millions of cells being involved. Those purposes which are of earliest origin have by the establishment of subcenters or special stations become more or less automatic, while those of latest conception are more or less fleeting, requiring much attention in the conscious mind for their performance. The cells receive impressions or ideas to be recorded or passed on, in the form of energy, toward the accomplishment of a purpose. In the preparation for contemplated action former impressions or ideas are weighed and the stronger ideas prevail in the form of action or judgment. Just whether these cell impressions cast themselves into the scale pan or whether there is some special selective faculty which brings the various ideas into function is still a source of argument. But the resultant judgment is determined by the most forceful and strongest ideas presented for the reasoning process. Just as the scale beam goes down on the heaviest side, so is the judgment or action determined. This apparently would mean that all minds with the same ideas would arrive at the same judgment, but, while external objects and facts must necessarily remain the same, their perception and method of use must be peculiar to the individual. These ideas, then, must not only

depend upon the stimulating object, but upon the sensory end organ, the different paths which conduct the impression, and the recording cell. This power to record and afterward to bring into the conscious mental field is called memory. The deciding force of the ideas is the will power. The different combinations of these ideas give the various qualities of mind, either for sense or nonsense. This very brief summing up argues that all is physical. The brain cells functioning in one case produce action, in another judgment. They are the same thing, but differently expressed.

Effects upon the physical produce effects upon the mind, the action, and bodily functions. Likewise effects upon the mind, the action or bodily functions produce effects upon the physical cell. The whole is closely related and no part can be isolated and considered independent. There are many common illustrations. Ether, morphin, the bromids, chloral and alcohol are every-day examples of external agents influencing the physical cells, with a resultant modification of the mental faculties where the brain is involved. Digestive disturbances, lack of nourishment, forms of defective tissue, metabolism, and numerous internal causes act upon the functions of the body by disturbing the physical cell basis.

On the other hand, we have an old saying that "the use of an organ makes it." It requires no argument that this is true with regard to the ordinary functions, but there has been some contention about the fact as applied to mind. Unfortunately mind is usually conceived of as confined to the brain. We have observed how the whole bodily force is required in the make-up of the mental faculty and there are many common every-day illustrations of pure mental impressions causing changes in the physical parts. The effect on the blood vessels is seen in the blush of pride or shame, the pallor of fear, the paralysis from shock and the tears from sorrow or joy. Immense muscular energy is sometimes developed during excitement. Nearly every intense mental perception is followed by more or less derangement of the physical. The physician is frequently confronted with cases where it is difficult to say whether the nervous condition causes the physical trouble or the physical condition causes the nervous manifestations. This vicious circle really may be broken by treatment along either or both hypotheses.

The fact that these nervous, physical conditions can be somewhat more reliably and positively produced by medication tends to prove our lack of knowledge in the use of psychotherapy rather than that it does not exist. If it be granted that

mind can produce physical conditions similar to drug conditions, it then is a simple process of selecting the therapeutic agent. As we progress in the study of psychology and the basis for mental therapy becomes more extended, more may be expected from this method, but the physician who ignores this means of healing is limiting himself just that much. A careful study of cases should reveal certain conditions which need adjusting. The production of these changes is the chief object in treatment and there is no reason why psychotherapy should not become an adjutant, at least, to the ordinary therapeutic measures. Physicians must use these methods consciously or unconsciously, anyhow, purposely adapted or just good luck. Our honor graduates learned in the so-called essentials of the modern medical college, and skilled in their application at the clinic, do not all become Sandy McClures by any means. They may lack the personal element. This new method is not confined to functional disorders by any means. For who can draw the line between the functional and organic disorders, and is not the organic invalid entitled to his share of the leaven for his case, exceeding small though it be?

The various means used in the practice of psychotherapy are as numerous as the effects upon the mind. Eventually these means will be classified, just as are our drugs to-day. And just as drugs are studied for physiological action, so shall the methods of psychotherapy be studied for psychic results. At present this classification is so chaotic that it is easier to turn from the analysis toward the individual.

Men consult physicians presumably to secure ease from something that has happened to disturb their peace, happiness and contentment. The ratio between strain and the ability to meet it has been changed. Two elements are presented for consideration, strain and physical ability. The strain of life acts very differently upon different individuals. Some, from ignorance and others from philosophy, do not apparently feel the burdens of life, while others seem to secure happiness only in combating and successfully overcoming the various difficulties that beset them. The vast majority, however, exist between these two extremes, and a careful analysis of individual cases must be made to apply the proper remedy. First, is the strain real or is it distorted? If real, and too heavy for the individual to carry, common sense would indicate the use of means to modify its character. Here is where we need friends, money, social workers, doctors, and other similar agencies. The friendless need protection, the penniless necessi-

ties, and the maimed the surgeon's care. Efforts, however, tending to lessen the ordinary strains of life are not calculated exactly to further the growth of the individual and are liable to destroy the ambition. Ambition is a potent factor in growth and progress and should not be curbed unless so excessive as to destroy happiness and peace of mind.

If the strain is not real, then efforts are made to present the facts as they exist before the patient for his judgment. This constitutes one form of psychotherapy. The external is arranged so that the mind can get a clear perception. As before stated, the object itself exists unchanged, but it exists in the mind of the individual, as he perceives it. A patient comes with a pimple, believing it to be a cancer, and is much distressed. After examination its true nature is explained, and he goes on his way rejoicing. The object of the physician is achieved by means where medication would be ridiculous.

If, when the external is placed in its true light, there is not a proper reaction, the trouble must be sought for in the individual. This takes up the physical ability. The first analysis is, Can he or can he not be brought to a capacity for solving his problems?

If he cannot, as far as treatment for the individual is concerned, all that offers is the lessening of his perception, so that the internal offending object will lose its forcefulness. Opinion differs as to the best method, medication or psychotherapy. The same results secured by morphin and hashish are produced by hypnotism. Autosuggestion may be used, calling into the attention a different set of brain cells from the painful set and producing a form of mania.

If the patient has the potentiality, and offers hope for improvement, the adjustment should proceed along the psychological lines indicated by the analysis.

First.—Has he enough ideas or working tools? The more facts and truths entering into a conclusion the more nearly is that conclusion to be relied upon. Large minds constantly searching for more light are in modest contrast with the egoism and assurance with which small minds settle affairs. Some patients make their own diagnosis and explain to the physician the nature of their ailment. Have them become as explicit as possible, then quiz them upon the anatomy, physiology and pathology of the part. Usually they soon smile and admit the foolishness of rendering such important judgment without more accurate knowledge. Then where deficiency in the number of ideas means lack of study and observation, have these cases take up their educa-

tion systematically, institute a course of wide reading and, if possible, urge them to travel, that they may procure more tools to work with.

Second.—Ideas must be correct. The best reason in the world must reach false conclusions from a mass of inaccurate information. The more nearly the perceptions correspond to the stimulating object the more value they have in the balance of reason. Patients should be encouraged to seek the truth, to verify their ideas by comparison with others, and by constant questioning secure accuracy and reliability for their information.

Third.—Every idea has accompanying it an effect or attribute, some pleasant, others disagreeable. These feelings constitute the various moods and emotions and sometimes become so strong that they dominate the sense of the idea. They act in a way to cause the distortion of the memory pictures by reinforcing ideas with similar effects, while suppressing those of opposite emotion. In their extreme they become factors in the manias and melancholias. Often they play a part in every-day life. While joy is preferable to misery, neither may be rational. The emotions should give color, tone and beauty to the judgment, but should not sway its accuracy. Animals and degenerates, not having the inhibition of higher reasoning, act as they feel. A dog might bite the hand that takes his meat away, poisoned though it may be. The individual needs feelings and sentiment for his best development, but they must be dominated by reason, especially in worldly things.

If the ideas or working implements are corrected, the analysis proceeds to see if they are being used correctly. This use is the reasoning power. Does the idea have its proper weight, pounds for pounds and ounces for ounces? The memory here plays its part, allowing some ideas to escape altogether and others to come in with such dimness that they have no force. The faculty of memory is dependent upon association, and this attribute is determined by the physical condition of the cell and the vividness and distinctness of its perception.

The memory can be cultivated just as the grosser muscular actions are developed. Both inability to reach conclusions and jumping at conclusions may be faults of memory.

Attention, however, is the usual element at fault. This faculty has received much consideration of late, especially by Munsterberg. Certain sets of brain cells have dominance over the reason, excluding certain other sets. These dominant cells may be selected by either outside or

inside agents. When stimuli from the outside command the attention of certain ideas to the exclusion of other ideas, the condition known as hypnotism exists. Similar conditions caused by stimuli from within are characteristic of hysteria, neurasthenia and psychasthenia. When these conditions exist, the use of hypnotism and autosuggestion in calling the dormant cells into action is fitting and proper that the balance of mind may be restored. Attention apparently has more to do with the expression of the cells, however, than upon their impression faculties. The attention is determined by the intensity of the stimuli, its effective or emotional tone, its similarity to past impressions, or its power to associate and combine into new concepts. These rules will frequently help the patient to correct his own disorders of attention without resort to the more complicated methods.

An excellent method of developing the reason is the mental ledger. Upon every subject a page is opened with a debit and credit side. The patient writes down all reasons for and all reasons against. His *happiness*, for example. After he has made all the entries possible, the doctor assists in adding further reasons. If there is difficulty in arriving at a conclusion, ideas of equal weight are crossed off, and the balance is placed in the column having the most ideas left. It is seldom the ledger cannot be made to balance in the patient's favor. This method also serves to give stability to the vacillating mind. The question once settled, the patient can turn back at any time and verify his judgment.

To reconsider briefly, the methods of psychotherapy can be roughly divided into three classes: blunting, substitution, and re-education. Psychically, blunting is accomplished by profound hypnotism, during which the patient is not conscious of the real strains besetting him. In the pronounced form the condition of hypnotism, sleep and stupor from drugs are similar functions or non-functions of the brain cells, whose physical condition has been caused by different agents. When we know just what the exact physiological actions of these various agents are, we can scientifically select the proper remedy. Most physicians prefer the various drug hypnotics, but unquestionably the same desired results without the undesirable effects of drugs are secured by hypnotism. If hypnotism was better understood and more generally used, at least an empirical basis could soon be established for its use.

The second method, of substitution, is accomplished by milder forms of hypnotism or autosuggestion. It is desirable as a means of insinuating a belief or impulse into the mind. Muns-

terberg, in his analysis, says it is due to variance in the attention, the suppression of some ideas and the reinforcement of others. The rules as outlined for attention form a basis for the use of autosuggestion. Some attempt has been made to outline practical means for autosuggestion. First, by emphatic declaration to dominate the reason and force itself as a conclusion into the conscious mind. Second, to change the scene and environment with the resultant change in thought and ideas. Third, to stir up the combative element by refusing to take the patient seriously, belittling his pet ideas and ridiculing his appeal for sympathy.

All these methods involve the substitution of one set of ideas for another. This can be used to good account in combating disturbing beliefs that are wrong and by substituting contrary ideas, restoring the mental balance. Also it is perfectly proper as a temporary or preliminary measure to substitute the beautiful for the ugly, or the ideal for the real, providing later that a basis of truth and reason be established. But to leave a patient with a false belief, not only is a failure to cure, but in many instances leaves him with a worse affliction than his original trouble. The Christian Scientist is a notable example. However, travel, congenial companions, music, amusements, hobbies and similar diversions are very necessary to drive away dull care and prevent a too serious view of life.

The third method of re-education proceeds along the lines indicated in the mental analysis. It is a process of growth and development. Efforts are made to have the ideas coincide with the facts about the object which has stimulated their production in the brain. Also to have these ideas receive the proper attention and value in the reasoning process. The judgment and conclusions or actions resulting from this educational method will not only help the patient to meet his present crisis, but also those of the future. The mind continues to grow and becomes stronger, giving the proper value to the various stimuli, making correct records, and rendering the appropriate afferent impulses necessary for harmony.

If the patient does not care to work and struggle, he can keep in harmony by becoming a philosopher, reasoning that people take life too seriously, that vanity and ambition cause many heartaches, and that earthly things bring only transient happiness after all. He may go further and realize that happiness and contentment are within and not without, and that only in the spiritual side of his nature can man ever expect to obtain that peace and serenity which transcendeth all understanding.

THE PSYCHIC ELEMENT IN THE CAUSATION AND CURE OF DISEASE.*

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The great triumph of our day and generation in the field of medicine has been along pathologic lines. The work of Virchow and his followers in the field of cellular pathology, revealing the structural changes incident to many diseases; the discoveries by Pasteur, Koch and others of the parasitic nature of many disease processes, making possible the marvelous achievements of surgical art and medicine—curative and preventive—these entitle our day to be called the “Golden Age” of medicine.

But this tangible knowledge gained from the laboratory, which has been such a rich blessing to the world, has not been unmixed with evil. If it has given to surgery a tremendous impetus, it has likewise made of the surgeon an extreme materialist. Is there a lesion? Remove it by the knife. And so brilliant have been the achievements that the surgeon frequently essays by his art to relieve functional disorders and so-called reflex conditions.

The internalist, recognizing a definite bacterium as the cause of a malady, finds in a serum a specific remedy. And thus in the great march of medical and surgical progress, practitioners, following the lead of cold science, have forgotten the human element. Man is treated in much the same manner as beasts, without properly taking into account the mental and moral elements which separate him so widely from the lower animals. The triumphs of surgery, the brilliance of pathologic discoveries and the eager search for laboratory proofs, have blinded our eyes to the true significance of the intangible in medicine—the mental element in disease.

If the medical profession has been guilty of undue materialistic tendencies, the religious world may with equal propriety be charged with the opposite extreme. In their reckonings the human body has been disregarded or even despised as carnal and unrelated to higher thought and aspiration. While willing to discourse upon the beauties of the lily, the theologian does not appear to have fully grasped the fact that the wonderful human body represents the aeme of creation, as recorded in Genesis, as well as the greatest triumph in evolution, as taught by science. It is indeed well that physicians who have been too materialistic, and theologians who have been too transcendental, should come closer together. Let the unity of the

body and spirit be recognized and reverenced as God's handiwork.

It is not strange that vigorous protests have arisen against the attitude of these learned professions; protests offensive alike to the scholar in theology and in medicine. Ridicule and the exposure of the erratic character of the leaders of these cults, such as Dowieism and Eddyism, have not in the least checked their advancement. Their numbers and influence already warrant the claim of a great religious movement, with ramifications world-wide. During the meeting of the American Medical Association in Boston, a still larger number of devotees assembled in that city to hear testimony to healing under the teaching of Eddyism. The rapid birth and growth of the “Faith Cures,” “Mind Cures,” “Metaphysical Healing,” “Christian Science” and like cults is an eloquent accusation of the medical profession for failure to properly occupy a legitimate field. I have no sympathy whatever for the philosophic rubbish which has characterized these sects. Their attitude toward infectious and organic diseases is not only senseless, but oftentimes criminal and destructive of life. But there is justification for their existence in the failure of the medical profession to give to the mind its just and proper relationship to the causation and cure of disease.

Many of the most prominent physicians, clergymen and educators of this country and Europe are awaking to a realization of this fact. Drs. Barker, Mitchell, Cabot, Putnam and Coriat of the medical profession; and Drs. Worcester, McComb and Professors James and Munstenberg for the clerical profession, have spoken with earnestness upon the subject. Abroad the work of DuBois and of Moebius are noteworthy. The translation of DuBois' work on “The Psychic Treatment of Nervous Diseases” should be read by every practitioner. Its philosophy, high moral tone and literary style charm and convince the reader. Inspired by intelligent optimism, he “persuades and reeduates” the reason of the neuropath. “Religion and Medicine,” under the joint authorship of Worcester, McComb and Coriat, is another book most readable, and, in most respects, sanc upon this subject.

It is not the design of this paper to enter into a consideration of the psychologic aspects of the question, such as the conscious and subconscious mind about which so much is now being written. The aim is to eliminate the speculative elements and dwell rather upon those practical phases which interest physicians skilled in healing.

It does not require labored argument to convince one that the state of the mind has a powerful influence upon the body functions. Personal

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consciousness offers daily proofs of this truth. A plate of luscious peaches arouses an appetizing reflection; the saliva wells up in the mouth. It is a matter of personal experience to us all that enlivening music, cheerful conversation, an optimistic frame of mind, are all conducive to secretory activity in the whole digestive tract. Kronecker in an experiment to determine the agencies which best simulate peristalsis, introduced a silver ball into the intestine of a dog. Then under the influence, respectively, of drug, mechanical and psychic stimulation, he found the ball made the journey most rapidly when the dog was invited to walk with his master.

On the other hand, who has not found the depressant effect upon the digestive processes of worry, anxiety, sadness, anger, and the like? The appetite fails; food lies heavily in the stomach; sluggish peristalsis is apparent in gassy distension of the intestine.

But the most striking functional reactions of the body which arise through mental influence, are those commonly designated as emotional disturbances. Who has not felt them? Were you able to stand coldly by while to stirring martial airs our boys marched away to Cuba? Had you no palpitation of the heart, no welling tear, no emotional impulse to serve your flag and country? And how does grief at the death of those we love best draw forth its anguish in a fountain of tears! According to the circumstances of causation, their quality, extent and sequels, we speak of these manifestations as physiologic or pathologic.

In all these complex processes the mind is the supervising agency; the superintendent of the human factory, so to speak, with subordinate foremen in charge of reflex departments. The intellect begins the work, but its completion or repetition may be left to the subconscious or reflex centers.

By the term "suggestion," now much employed in the consideration of nervous and mental diseases, is ordinarily meant a hint to the mind, directly or indirectly. The individual accepting and acting upon these hints without mental analysis is said to be suggestible. When a subconscious state is obtained in which a person's will is in abeyance to that of the operator, the condition is one of hypnotism. Suggestions may arise from mental or physical influences outside the body, or from subjective sensations within the body. The latter are called autosuggestions.

Every individual is more or less suggestible—the majority highly so. A successful salesman is he who understands the full meaning of suggestion. In the field of life insurance the same

principle enables the agent to write an application. Successful promoters are gifted with suggestive tact to a high degree. Scientific men and even physicians are suggestible. Who of us has escaped the alluring suggestion of the mining stock and oil field promoter? Do we not daily come under the suggestive spell of gifted proprietary agents, and at the present time is not the great American Medical Association and this Society engaged in a crusade against the evil influences upon our profession of pernicious suggestiveness of advertisements from mercenary drug manufacturers?

Another interesting but pathetic phase of suggestion is to be found in a study of patent-medicine advertisements. From "Blood Diseases" to "Lost Vitality" they possess the one aim of spreading terrorism in the minds of the weak and impressionable. What physician has not encountered the sexual neurasthenic, or drug habitué, who has been the victim of this nefarious form of suggestion?

Suggestion is at the bottom of training and education, from infancy up. At suggestion the little tot waves its hand in farewell salute. The child bumps its head, the fond mother says, "There, darling, don't cry!" and forthwith the negative suggestion elicits a deluge of tears. Fond parents by suggestion unwittingly lay the foundation for habits in their children which prove their undoing in later life. Maternal sympathy excuses the completion of a task, lest the child get tired; a trifling injury is magnified until the psychic insult is tenfold worse than the physical injury.

Maternal sympathy is a beautiful subject for poetic contemplation; it awakens in our memories the tenderest sentiment. But that is not a true, certainly not a wise, motherly sympathy which does not take into account the later life of the child. Do we not all know families in which the misguided affection of a mother cultivates continuously in the household an atmosphere of disease suggestion? If the daughter is piqued or disappointed in a social way, the inquiry is, "Do you feel badly? Have you a headache?" The psychic reaction is sure to follow. She must lie down. Friends cannot see her to-day. A pathologic habit—a distinct psychosis is soon developed.

Pampered, whining weaklings are the net result of such faulty domestic training. They reach maturity wanting in self-confidence; deficient in stamina; weak physically. Failure marks their efforts in life, and a psychoneurosis is apt to cloud their career.

It would be better for children to have plenty of the rough and tumble which develops physical and moral courage. Teach them to bear pain with

fortitude; to finish tasks, though they be difficult and exhausting; to bear disappointments with a smile. It is only thus that the nerve centers acquire good habits which make them proof against future instability and deterioration. This is the Roosevelt type of individuality. Let parents by wholesome suggestion to children lay the foundation for future efficiency and mental health.

The influence of suggestion has often wrought powerfully for good in the world. It has been an element entering in the great religious movements which have swept the world from time to time. Great revivals have this quality for their mainspring. Some of you may have witnessed the contagious shouting of the early Methodist revivals.

Every physician worthy the name must reckon with the psychic element in organic disease. To the patient seriously ill our duty is to husband his natural powers, and guard especially against any depressing mental influences. Who would have the temerity to permit visits from business associates or gossiping neighbors? How often we see with regret the confusion and disorder of the sick room—bottles littering the table; platters of stale food; clothing scattered about; unnecessary people mumbling melancholy tones; the whole environment, in fact, a wail to the unfortunate patient that he is perhaps sick unto death. The first duty of the true physician will be to bring order and good cheer out of this melancholy confusion. What is accomplished will depend as much upon what the doctor is as upon what he knows. His personality must inspire faith. To the patient this will be the most potent therapeutic factor. Add to this the orderliness, the quiet and cheeriness of a trained nurse, and a new atmosphere is created which is equally as important to the patient as physic.

But it is more especially in connection with the cause and cure of the so-called functional disorders of the nervous system that it is desired to discuss the mental element. Given in a patient, first, a neuropathic heredity; second, faulty education or training; third, unusual stress, which may be physical, mental or moral, and the conditions are present to provoke a psychoneurosis. The intellect becomes wavering and will-less. The mind is no longer commander of the body, with loyal subordinates throughout the realm. There is confusion at headquarters; false messages are sent and received. To speak less fancifully, there arises a great variety of mental and nervous manifestations, generally spoken of as functional nervous disorders. According to the dominance of one symptom group or another, they are classified as neurasthenia, hysteria, psychasthenia and

hypochondria. They constitute a large proportion of the cases which physicians are called to treat. Our failures with them become the triumphs of "Mind-curists" and Christian Scientists.

As a medical student I was taught by very able men to believe that most nervous conditions in woman were due to lesions of the pelvic viscera. The advice was to treat the latter efficiently by topical or surgical measures, and the nervousness would disappear. Here, then, was hope for the great host of hysterical, neurasthenic women. Five years' subsequent observation in insane hospital work proved to me the rarity of uterine and ovarian disease among these cases: it was, furthermore, demonstrated that topical and operative measures frequently acted in a suggestive way to multiply or fix the psychic symptoms. In a large proportion of the female patients admitted to our state hospitals for insane, it will be found that the attending practitioner lays stress upon some suspected disorder of the genitalia as responsible for the nervous or mental condition. On the other hand, experience in such an institution soon convinces one that subjective symptoms related to the genitalia are more likely to be secondary to the nervous or mental state, rather than causative of it.

And with the male sex have not the genitourinary specialists been massaging the prostate gland and seminal vesicles for sexual neurasthenia—a psychosis? A little later came the renal surgeon to anebar the floating kidney for the relief of "nervousness." And now appears the gastroenterologist with the dilated stomach, gastrophtosis and enteroptosis, to explain various nervous disorders, he apparently oblivious of the fact that extensive hernial prolapsus is practically never followed by nervous manifestations.

These observations impress upon us the frequent failure to diagnose the psychoneurosis; the mistaking of effect for cause. In neurasthenia especially, many prominent symptoms are remote from the central nervous system. It is not strange, therefore, that they are wrongly interpreted as indicating a pathologic change in the region where the symptom is noted. The layman is warranted in such a conclusion; but the physician should not so err. The stomach and pelvic organs are those concerning which errors are most likely to be made. No less authorities than Musser and Cabot have recently expressed the opinion that not to exceed 10 per cent. of the cases treated as stomach trouble are really disorders of that organ. My personal observation corroborates this view. Pain and cructations from the stomach; tenderness and pain in the ovaries, as part of a psychoneurosis, become autosuggestions which act badly

upon the sensorium in establishing a vicious circle and perpetuating the nervous condition. Let us not add to the seriousness of the situation by local measures directed to stomach or genitalia which are harmfully suggestive.

What is here said applies with equal force to the specialist and general practitioner. Nor would I spare the laboratory man. He who makes too frequent examinations of the urine in diabetes mellitus; who daily searches the urine for casts in arteriosclerosis; who makes frequent blood-pressure determinations, is apt to undermine and weaken central nervous control. A very striking example of the harmful suggestive influence of excessive laboratory investigation and dietetic scrutiny has recently come to my notice. The patient, a woman of 40, has rather advanced arteriosclerosis. During the past year she spent several months in a well-known sanatorium where laboratory methods are on "dress parade." They certainly were not used with discretion in her case. Frequent gastric analysis had formed the basis of a restricted dietary list; the urine, blood and blood-pressure were the subjects of repeated examinations. She returned home highly nervous and introspective, having lost 15 pounds. She came to me with the request to continue these examinations. The Riva-Rocci instrument showed a blood-pressure of nearly 200. First, she was urged by the writer to drink milk freely between meals and to force a general diet, despite a capricious appetite. Secondly, she was advised against frequent special medical examinations, and urged (after careful study of her tastes) to undertake with some vigor a line of work which was to her liking. She was intelligent and amenable to persuasive suggestion. She was convinced that a cheerful optimism would prove helpful. Three months' trial have restored the lost weight, banished the neurasthenia and reduced blood-pressure to 150 mm.

Certainly, the writer would not be understood as advocating superficial examinations. On the contrary, let every case be critically searched for organic lesion, by every physical and laboratory method. In such diseases as typhoid and pneumonia frequent examinations are necessary to guard the safety and secure the recovery of the patient. The contention in the present discussion is: Given the diagnosis of a psychoneurosis, then frequent laboratory examinations are to be avoided; and local treatment for functional symptoms should be undertaken only after the most careful circumspection. The one thing needful to remember in all these cases is the loss of proper psychic control. Restore this and the functional symptoms will pass away.

The medical profession, as a whole, labors under the erroneous impression that psychotherapy is something new. Every successful practitioner has employed it more or less. Country doctors enjoy unusual opportunities for its exercise. Their intimate acquaintance with patients and their environment give vantage ground in recognizing the moral cause of the neurosis and applying the proper psychic remedy. The mode of action in surgery is often psychic rather than physical. How else may we explain the occasional recovery from nervous conditions, following the "Great American operation" and other surgical interference? It is well in this connection to remark again, that surgery, in neuroses, instead of helping, may only add fuel to the fire.

The term "psychotherapy" suggests at once the idea of mysticism—the gyrations of the professional hypnotist. Prejudice enters our minds, that psychotherapy may be unscientific. On the contrary, it is not only scientific, but it represents the very acme of art in the practice of therapeutics. The man who successfully employs it must be intelligent, judicious and tactful. He must have the faculty to inspire confidence, for perhaps the first step toward recovery will be to elicit the "confession of a deep hidden secret." He must have the ability to persuade, or, if need be, the force of character to command obedience.

No rule can be laid down on how to proceed in the treatment of any of the psychoneuroses, except that at the outset complete knowledge should be gained as to heredity, the personal history and personality of the patient, the cause and course of development of the nervous condition, and, finally, a complete physical examination.

The plan of campaign is then mapped out. Drugs may be advisable, as a mild tonic for anemia; an alkali for hyperacidity or dilute hydrochloric acid for hypoacidity; but sedatives and hypnotics are rarely indicated. They are, in fact, apt to be much abused, leading to derangement of nutrition and the formation of drug habits. Better secure sedative effect through open air, forced feeding, hot baths, and, above all, judicious psychic control. Remedies may be administered, purely for mental effect. If in the giving of any remedy the physician adds a convincing suggestive personality, the therapeutic efficacy is heightened tenfold.

The more severe neuroses should be treated by isolation. Beginning with the Weir Mitchell method, the dietetic régime may be gradually enlarged to the point of forced feeding. Milder cases do not require isolation, but the forced feeding must be adhered to religiously. Massage, electricity and hydrotherapy may be employed at

times with benefit. But along with all these measures and more important than all of them, is the so-called moral and psychic management of the functional disorder.

The prescription treatment of these cases is a simple matter; but their moral and psychic management is most difficult and trying. The physician must not merely be equipped with professional knowledge; he must display consummate wisdom. He must maintain always that poise and command of the situation which inspires confidence. Here is opportunity for superior generalship not exceeded anywhere in the realm of medical practice. Often it is a question of bringing order out of domestic chaos. In the successful treatment of a case, the fundamental factor may be the judicious management of other members of the family, rather than the patient. It is very desirable in the outstart to learn the full story of the development of the malady. A capital plan is to "back-track" in the history to the point where the patient first wandered from the usual course of life into the wilderness of nervous confusion. A new start is made and the constant effort is to lead the patient along the path of nervous self-control. The doctor's business is to show him the way and how to walk in it. The morbid nervous career may be lived over again in the imagination, revealed in every detail to the physician. The doctor, listening attentively, calls a halt in the narration, saying: "Here was an explosion. You lost your nervous balance; anger and hate ruled! An insult was offered the moral centers of your brain that they feel yet. Go back now to that occurrence in your imagination; but this time don't explode; maintain your composure. Show forbearance, forgiveness and mercy. Substitute for the old picture, the new one—the one it were better you had acted out. Live the good picture over and over again, and in time it will, as surely as can be, neutralize the harm done by that first unfortunate explosion."

As the abuse of the imagination is generally the chief factor in furthering a psychoneurosis, so its proper use, the repeated contemplation of ideal pictures and situations, will bring healthful reactions in the brain centers and restore the normal conditions.

The patient should be given to understand that all functional nervous troubles *are curable*. Brief, forceful pronouncements are most effective. The physician's visits should be marked by contagious optimism, which parries unhealthy suggestions and holds up to view the hopeful aspects of the case. One mistake often made is to promise rosy extremes in the near future, which in the very nature of things, will not be realized. Better lead

the patient step by step, than by leaps and bounds. Each improvement should be made the text of an encouraging "sermonette." The emotions and the will must be trained anew. The dangers from hate, fear and anger are dwelt upon. The true, the beautiful and the good are kept constantly before the mind. If there is religious bent, make use of that. To the true believer, prayer, the prayer of thanksgiving, may prove a solace to "fear-thought," and induce rest where hypnotics fail. Thus by patient and intelligent persuasion the mind is re-educated. Self-confidence is gradually re-established. The person comes to himself. This is the substance of the persuasive psychic treatment as practiced by Dubois.

In some cases the persuasive line of attack may fail. To them, the form of psychic influence necessary to effect a cure may be an unusual stimulus, as a great responsibility suddenly forced upon them, or a commanding, satirical suggestion. The following case will illustrate this type:

The patient was an exceedingly talented professional man, who, from the stress of a large business, with many nagging responsibilities and worries, had developed the typical neurasthenia. He suffered from insomnia, fatigue, gastric distress, and was moody and introspective. He spent a great deal of time regaling his friends with the story of his lost health and the fear of its continuance. Various physicians were consulted and treatment instituted without benefit. His most intimate friend was made the instrument of a bold line of suggestive therapy. Going to the neuropath, the friend spoke thus: "Jones, you are making a fool of yourself; you are talking to everybody you meet upon the street about your symptoms; it is getting noised about that you are a ruined man, that your business is going to pieces. Brown, your hated rival, whose fondest ambition has been to see you down, has already made the boast that he has triumphed. Pull yourself together and don't ever again mention your headaches or the pains in your stomach to a living soul. Go to work and prove to your friends the stuff you are made of." The suggestion worked. He went to work, and so far as anybody knows he did not refer to his symptoms again. His recovery was complete.

The following case will serve to illustrate the value of suggestion in hysteria: The patient, a woman in middle life, had suffered from hysterical aphonia for several months. I was called to see her on account of a violent "nervous chill." There was general muscular agitation; her eyes blinked, her teeth chattered, and those about her were in a state of great excitement. With all the composure at command, I said: "This chill is

the ill wind that will blow you good. It will prove a God-send. This violent shaking will restore your paralyzed vocal cords. Take this medicine (elixir of valerianate of ammonium and bromid of sodium), go to sleep, and when you wake up you will be able to speak." She carried out the program of suggestion to the letter. Next day she was able to talk as well as ever.

Recreation therapy—a type of psychotherapy—plays an important rôle in the management of functional neuroses. It is not enough to tell a patient to take a daily walk or to go to the theater. Ascertain what he enjoys. Fortunate is the psychopath who enjoys hunting or fishing; or, still better, the ocean or the mountains. The ceaseless lashing of the sea has a wonderfully calming effect upon the emotions: the inspiring grandeur of the mountains is also quieting and lifts one to higher mental levels.

Occupation sustains a very important relationship both to the causation and cure of the psycho-neurosis. Distaste for the vocation in which one is engaged is not infrequently the cause of the nervous disorder; permanent cure, therefore, of such neuropaths can only be hoped for in the end if occupation is secured which is agreeable. In the treatment of the neuropath the physician will find it advantageous to discuss and plan for his work when the cure is completed. It is helpful, first, in convincing the patient of your faith in his recovery, and, secondly, it promotes the power of self-control. I wish to quote the following case of hystero-neurasthenia as illustrating very well several of the points discussed, but more especially emphasizing the value of persuasive psychotherapy and occupation therapy.

The patient was a young teacher, of slight neurotic taint. Her family was large and in limited circumstances. She had an extraordinary mind. Her educational opportunities were meager, but she was an omnivorous reader of good literature. She thus acquired a large store of knowledge and a fine literary taste, which found no sympathetic recognition in the country village where she lived. She became dissatisfied and neurasthenic, largely as a result of environment; ovarian pain was a very distressing symptom. She was obliged to give up her school. A very distinguished surgeon, known to all of you, removed both ovaries. The operation, instead of affording relief, converted her from an ambulatory to a bed-ridden neurasthenic, a condition in which she remained for two years. She was removed from her family and placed in charge of a very tactful trained nurse, where I treated her by persuasive suggestion for three months. She had all the manifestations of hysteroneurasthenia in exaggerated form—nota-

bly profound exhaustion, vomiting, headache and emotional disturbance. She was put upon the Weir Mitchell régime for a week; then the diet was gradually increased. The forced feeding was adhered to, despite protests and vomiting. All the while her intellect was appealed to and persuaded. I recall vividly that one day a sliced tomato was added to her dietary. It was brought in while I was talking to her. She was appalled at the thought of trying to eat tomato. My reply was, "Well, I shall not only expect you to eat it, but I command you to write a poem about it." The suggestion worked. At my next visit she had composed a very creditable page of "doggerel" about the tomato.

The next step in her psychic education was to plan for her future, when a "cure" should be effected. Her tastes and capacities were studied. It was decided that in a few months she should take a course in a library school. This was done in due course of time. For three years past she has been in charge of one of the principal Carnegie libraries of Indiana, well in body and in mind.

Brief mention only need be made in this connection of the Emmanuel movement. It represents an earnest effort to bring the power of an optimistic and hopeful religion into cooperation with medicine in curing functional disorders. The early endorsement of the movement by several eminent divines as well as distinguished physicians gave it most respectable prestige. It is safe to say at this time that after fair trial the plan has been found wanting. As incompetents in both the church and medical profession have sought to apply it, the limitations of the plan and the abuses to which it is prone have become more and more manifest.

In selected cases it is not only desirable, but a therapeutic procedure of the highest value to the patient for the physician to seek the cooperation of a wise and tactful clergyman. But a medicalized clergy—which the Emmanuel movement tends to create—would inevitably result in deterioration of both ethical and scientific standards. The doctor's position must remain supreme in the field of medicine. But let him never fail to recognize that religion and mental therapeutics are often not only aids, but may be imperative needs in effecting the cure of disease.

But however much criticism we may heap upon the erratic agitation of Christian Science and allied mental healing cults, or upon the saner but impracticable Emmanuel movement, it cannot be denied that they have rendered an invaluable service to religion and medicine. The church has been brought to appreciate that in dealing with

man's ethical nature his physical and mental side must also be reckoned with.

On the other hand, the medical world has been roused from its cold and torpid materialism. Such unchallenged sway had the microscope, the test-tube and the knife gained, that mental therapeutics threatened to become a lost art. The old-school type of physician, who understood so well the humanitarian and mental aspects in disease, has been largely replaced by specialists, excellent in a way, but with a narrowed vision of man; who fail to consider him as a whole—that is to say, as a tripartite organism, with a mental, a moral and a physical nature. Specialism, with all its blessings, has tended, unfortunately, to dehumanize the profession and rob doctors of those sympathetic elements of character which marked the Good Samaritan and the Great Physician. The agitation of the day will spur the profession to a scientific and practical study of psychology—normal and pathological. In these investigations the great truth will be brought home to us all that in the cause and cure of disease—organic and functional—the mind plays a very important rôle.

SYPHILIS OF THE NERVOUS SYSTEM.*

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From a perusal of the literature of the last few years it would seem that syphilitic lesions of the nervous system were of more frequent occurrence than formerly. More likely it is that this increase is more apparent than real. A better understanding of the pathology of syphilitic inflammation has brought about a more accurate classification of these diseases.

The fact that syphilis did attack the nervous system became evident from the very first that the disease received any careful study.

Ulric Van Hutton¹ is supposed to have been the first to recognize the importance of syphilis in the development of paralysis and apoplexy. Paracelsus, Astruc, Van Swinton and others considered syphilis to be the mysterious cause of any and many diseases of the nervous system. The idea advanced many years ago by Botal and Fallopian, i. e., that the nervous symptoms were brought about as a result of pressure upon the nervous tissue, from necrosis of bone, exostoses and gummata of the osseous tissue in the neighborhood of this nervous tissue, prevailed for many years.

* Read before the Indiana State Medical Association, at Terre Haute, Oct. 7, 1909.

It is interesting to note the tendency of the profession then as now, to follow an extreme view when put forth by a prominent member of the profession. The celebrated Hunter declared that neither the brain nor abdominal viscera are subject to syphilitic disease. These views were practically in force until Virchow showed that a certain peculiar infiltration of the meninges, in the development of the skull and cortical tissues of the brain, was due to syphilis.

Stenberg, in 1860, was the first to lay special stress upon the fact that disease of the blood vessels was of greatest importance in the development of syphilitic disease of the brain and cord. Huebner, Freidlander, Bumgartner and Rumpf have each contributed articles on the pathology of the arterial changes which take place in specific disease of the nervous system.

The lesions occurring in the course of constitutional syphilis belong to the class of infective granulomata; they are inflammatory in their nature but their seats, distribution sequence and histological characters, present certain peculiarities which make them characteristic of the disease.

Of the later lesions the most frequent change is fibroid induration.² This is ordinary productive inflammation ending in scar tissue. The irregularity of distribution of these areas of fibroid or scar tissue is characteristic of syphilis. The production of fibrous tissue and the formation of gummata perhaps concern us most in considering the pathology of the nervous system, because it is the condition most frequently met at autopsy.

The headache, vertigo and irritability sometimes manifested upon the first invasion of constitutional syphilis have usually been ascribed to the psychical disturbance attendant upon the knowledge of the possession of syphilis.³ It is possible that this apparent cerebral irritation may in reality represent a slight hyperemia or even a slight infusion into the meninges of the brain, representing in a measure at least the hyperemia of the skin which takes place at the time of the appearance of the secondary eruption.

Alrik Ljunggren² maintains as an established fact that during the first stage there occurs a temporary hyperemia of the cerebral meninges or of the interstitial matter, which he compares to the hyperemic forms of the secondary syphilitic eruptions; he insists that cases of meningeal irritation at the period of invasion of syphilis have not to be counted as a rare affection.

Lang² believes that there are meningeal irritation and inflammation at this time, on account of the existence of similar irritative changes in the fundus of the eye. Out of forty cases examined

ophthalmologically in the early stages of syphilis. Nineteen had a normal fundus, fourteen showed chorioidal irritation in different degrees, and in seven he was able to demonstrate an inflammatory process of the choroid or of the retina. In these latter cases the inflammatory changes were of high degree, and yet there was no change in the vision.

Changes similar to those in the cerebral meninges undoubtedly take place in the meninges of the cord at the time of the invasion of syphilis, which would explain the vague pains, paresthesia of the legs and a feeling of debility, as a direct or reflex irritation of the spinal cord.

Jarish and Finger have reported cases of increased reflexes of the skin and tendons in recent syphilis before or at the time of the eruption. Judging from the above statements, it would seem that syphilitic disease affects the brain and nervous system early; in fact, shows a predilection in that direction contrary to the old opinion that syphilis of the brain and cord are comparatively rare.

Some idea of the frequency of nervous syphilis can be gained from the incomparable statistics of Fournier. Out of 4,000 cases, gathered in a period of thirty-nine years, 758 were affections of the brain; 1,098 were affections of the spinal cord, thus giving a grand total of 1,856 cases in which the brain and cord were affected.⁴

Out of 2,500 cases reported by Keyes, 20 per cent., or 504 patients, were afflicted in the nervous system. Of all the patients showing tertiary and parasyphilitic lesions, 42 per cent. were affected in the nervous system.

Landousy remarks that it is incredible how often one meets with nervous affections caused by syphilis, especially lesions of cerebral syphilis, both in hospital practice and private. Raymond is responsible for the statement that syphilis is the most common cause of diseases of the nervous system. Fournier says that the nervous system is the victim par excellence of tertiary syphilis, and the active principle of syphilis, which is a poison for the whole system, is especially a poison for the nervous system.

In a large proportion of cases in which syphilis attacks the nervous system it does so in the absence of any obviously sufficient reason and simply, as Mauriac says, because, forsooth, it pleases it to do so. In spite of the statement of Mauriac, there are some factors, usually classed as the etiological factors of syphilis of the nervous system, but which, it seems to me, might better be called determining causes.

Race.—Nervous syphilis more frequently affects members of the white race; full-blooded

members of the yellow, brown and black races being almost entirely immune to the parasyphilides: they also show a relative immunity to the syphilides of the nervous system.⁵ This immunity is present in the absence of medical treatment or any of the common rules of hygiene.

Sex.—Of the series of cases reported by Keyes,⁵ only 10 per cent., or 21 cases, were in women as compared to 483 cases, or 21 per cent., in men.

Age.—We find a difference in the result of inherited and acquired syphilis as regards the age of occurrence. When the nervous lesion is the result of an acquired syphilis, it usually manifests itself late; that is, there is usually a history of several years intervening between the initial sore and the appearance of the nervous lesion, which ranges, as a rule, between three and ten years. Cases are on record where the interval was short. Gowers reports a case where it was only six months, and another of only three months. Wood records a case where the interval was only two months and eight days. Nolan reports a case of paretic dementia in a boy of 18 years following inherited syphilis. The literature contains recorded cases of nervous syphilis of the inherited form coming on from 17 to 20 years after birth and presenting no symptoms previous to that time.

Keyes says that the older the victim at the time of infection the earlier the outbreak of his syphilis in the nervous system. He brings the following statistics to bear on this point: Of men infected before 20, one had nervous syphilis within two years. Of men infected between 20 and 29, twelve had nervous syphilis within one year, 41 within two years. Of men infected after 30, 31 had nervous syphilis within one year, 51 within two years. Thus the older the man at the time of infection the more likely is he to have nervous syphilis and the sooner will it begin.⁵

Attention has been drawn to the probable pathologic condition present at the time of the invasion of syphilis. While nervous syphilis may take place early in the course of the disease, it is usually a late or tertiary manifestation, and the pathologic condition present at this time is vastly different in nature. It is impossible for me in the time allotted, to discuss the many conditions which may arise as a result of luetic infection of the nervous syphilis. For that reason I propose to present to you the pathology of three conditions, i. e., paresis, tabes and multiple cerebrospinal syphilis, and report the case history of a patient afflicted with the last-named condition, in an attempt to show the similarity of these diseases and to demonstrate the necessity of early and heroic treatment, with its excellent results in

cerebrospinal syphilis and the utter failure of antisyphilitic treatment in paresis and tabes, with the reason for that failure.

In paresis the macroscopic changes in the brain are well marked. They are those of meningo-encephalitis, and are most pronounced on the convexity of the hemispheres. In the Rolandic area and along the superior longitudinal fissure the dura is adherent to the skull. The pia and dura are usually glued together and adhesions develop between the cortex and the membranes, as shown by pieces of this tissue stripping off during removal.⁸

The pia arachnoid is thickened and vascular and the Pacchionian granulations are increased. Under the microscope the vessel walls show thickening and induration.

Matt believes that the starting point of paresis is a degeneration of the nervous cortex, and that this takes place through the action of a toxic substance called cholin, which produces a venous stasis in the veins of the brain. There occur degeneration in the nerve elements and proliferation of the neuroglia. The spinal cord is somewhat involved in this condition through the meningeal disease and degenerative changes in the posterior and lateral columns occur.

Of tabes McFarland⁹ says: "There are three theories to explain the origin of the disease: first, that it depends upon primary disease of the cerebral cortex; second, that it is a primary affection of the posterior columns; third, the newest and probably the best, that it depends on a primary disease of the posterior nerve roots. The lumbar seems to suffer more frequently and more severely than the dorsal, and the dorsal more frequently than the cervical cord. It is a chronic myelitis characterized by atrophy of the nervous substance and proliferation of the glia. The myelin sheaths first disappear, leaving the axis cylinders denuded, fat occurs in the tissues in molecular form and is gathered up by leucocytes, which appear in considerable numbers in the lymphatics about the blood vessels. Amyloid bodies may be numerous. The nerve centers are slowly destroyed, many resisting destruction long after their myelin sheaths have disappeared. The neuroglia proliferation occurs in degenerated and atrophic areas and leads to the formation of coarser fibers than are usually seen, and later to contraction. The columns of Gall and Burdach are affected. The posterior nerve roots are nearly always degenerated. The cells of the ganglia of the posterior nerve roots are frequently destroyed and degeneration of the sensory nerve endings nearly always occurs. It has also been found that the nervous lesions of tabes dorsalis are not peculiar to the

spinal cord and peripheral nerves, but that the sclerotic process extends irregularly into the brain, where foci of gray degeneration or sclerosis may be found in the nervous substance and in the optic, oculomotor and trigeminal nerves."

Regarding the frequency of disease of the posterior columns in paresis, the statistics of G. Renaud seem conclusive.⁶ Among 482 cases it occurred 25 times, and, of these, 14 presented typical tabes. Joffray maintains that true tabes complicates general paralysis but rarely. Marie points out what he believes to be an important difference between spinal lesions of the tabetic form of paresis and tabes, i. e., in the former they arise within the cord and are endogenous, and in the latter they begin in the posterior roots and are exogenous.

An attempt has been made to separate by symptomatology principally syphilis of the brain and syphilis of the cord. It is impossible to draw any sharp line of distinction between syphilitic inflammation of the brain and cord for few, if any, cases present symptoms limited alone to these organs, and therefore the term multiple cerebrospinal syphilis is to be preferred.

We find that in this condition the lesions are limited more or less to the blood-vessels. The formation of gummata and the infiltration of the vessel walls may involve all three membranes, and all three may become more or less fixed and adherent to the brain and cord. The blood supply over various portions of the brain and cord may be interfered with. The lesions are usually diffuse, thus accounting for the many symptoms presented. If there are localized gummata, the symptoms of spinal or cerebral tumor may be present, giving rise to characteristic focal symptoms.

In a widely diffuse inflammation of the membranes of the cortex of the brain, psychic symptoms are frequent, and these cases closely resemble paresis.⁶ Gummatus exudations frequently take place at the base of the brain, most frequently at the optic chiasm, the interpeduncular region and the adjacent portions of the middle and posterior cranial fossæ. Involvement of the cranial nerves is, therefore, common from pressure and infiltration of their sheaths and the vessels supplying them.

The symptoms of tabes and paresis are too well known to need repetition at this point.

The following case history will illustrate, I think, a typical case of multiple cerebrospinal syphilis: Mrs. T., aged 37; American; married; one child stillborn. Was first seen by me on Dec. 22, 1905, and gave the following history: Illness began about one year ago, with cough and

some sore throat. She lost weight and became anemic. She was treated at this time for incipient tuberculosis and was advised to go West. She improved somewhat under treatment. About six months ago developed an ulcer on the tonsil, which was pronounced tuberculous by her physician. She then began to develop "stomach trouble," i. e., cardialgia, eructations, etc., and the loss in weight was marked. At about this time she began having increased thirst and passed large quantities of urine. Appetite good. One week previous to my visit she had a fainting spell, felt dizzy and went to bed, began to see things double and developed numbness of the right side. My notes of the case read as follows: Family history: Father living; mother dead, cause unknown. Two brothers and one sister living and in good health. The patient is weak, greatly emaciated and anemic. No external findings of note.

Chest.—Impaired percussion note right base. Coarse râles and harsh breathing. Heart normal.

Abdomen.—Negative, except liver dulness increased. Slight.

Pelvis.—Some tenderness in right pelvis, but nothing abnormal discovered. Some vaginal discharge (not marked). Menses irregular; missed three months.

Nervous System.—Knee-jerks on both sides were markedly increased, as were all of the rest of the reflexes. Pain and temperature senses not altered. Feeling as of cushions on the soles of the feet. Babinski and Gordon reflexes present. Slight tremor of the tongue. No other tremors present. Station good. Partial hemiplegia involving right arm and leg and muscles slightly spastic. Mentality good. Complains of occipital headache.

Eye.—Dr. Henry Ranke reports no difference in eye-grounds, both being normal. Pupil reacts normally. Ocular movements good and no ptosis present. Diplopia marked. Testing the field of vision reveals binasal hemianopsia.

Urine.—Two hundred ounces in twenty-four hours. Sp. gr. 1003. Turbid and alkaline. No sugar. No albumin. No phosphatic sediment. Contains a few blood cells and bacteria.

Diagnosis.—Multiple cerebrospinal syphilis.

Treatment.—The treatment which was given in this case, and which was entirely successful in relieving every symptom, was as follows: Ung. hydrag. 1 dram rubbed in night and morning; 1 dram doses of saturated solution K. I. three times a day after meals. Citrate of iron, 10 grs., t. i. d., p. c. Codein sulph. gr. $\frac{1}{4}$ to control the polynria. In addition, hygienic measures were instituted. She continued this treatment for about four months, and when I last saw her she was symptomatically well.

A like result cannot be obtained from a similar treatment in paresis or tabes, because the syphilitic exudation is only a part of the condition present, as a glance at the pathology of the two conditions will show. I believe, however, that active antisyphilitic treatment is in a measure responsible for the stationary periods of these two conditions.

Time will not permit further discussion of methods of treatment of this condition. In conclusion, I should like to emphasize two points: 1. Early recognition of the nature of the disease of the nervous system before destruction of nerve tissue has taken place, and irreparable damage produced. 2. The institution of early treatment of an heroic kind until the symptoms are controlled, then tonic doses of mercury to be continued over a long period of time.

BIBLIOGRAPHY.

1. Morrow's System of G. U. Diseases.
2. Green's Pathology and Morbid Anatomy.
3. Ravagli: Syphilis.
4. Fournier: Syphilis; Treatment.
5. Keyes: Syphilis.
6. Dercum: Nervous Diseases.
7. Clouston: Nervous and Mental Diseases.
8. Brower and Bannister: Insanity.
9. McFarland's Pathology.

REPORT OF TEN CASES OF BRAIN SYPHILIS, WITH COMMENTS.*

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One always feels a certain degree of hesitancy in directing attention to a subject which has apparently been viewed and studied from every standpoint, but there is always this that can be offered in apology: that no matter what the pathologic conditions or clinical manifestations may be in general, they will vary individually according to the variations in the characters and qualities of the causative agency, in the reactions of the nature and constitution of the individual to that agency, and in the make-up and ability of the observer; consequently, any report that may be presented, cannot fail to bring out some points of interest, even though it may overlook others of equal or perhaps greater importance. It has often been demonstrated that, no matter what the subject, or how it is presented, if in so doing it offers but a single thought which will enable us to more clearly comprehend or to more rationally control that condition, the time and energy utilized in its development, or given to its presentation, is well spent.

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So far as the causative agent in this diseased condition is concerned, it is now generally accepted that it is unquestionably a parasitic infection, but there is yet much to be learned in regard to its morphologic characters and physiologic functions. It is reasonable to assume, however, that it, like all other organisms so far studied, varies in its different properties and characters, and also that there may be different species of the same order. This assumption, furthermore, is supported by the different results produced in different individuals and under different circumstances, yet we must not lose sight of the fact that those variable results may be due in whole or in part to just those different conditions or different circumstances. It is well known that the intensity or extent of the primary infection is no positive indication of the virulence or infectiousness of the organism as manifested by later developments. It is not at all an uncommon event to see cases in which the primary infection is or has been so slight as to almost or even quite escape one's notice, and yet the later manifestations prove to be the most intense, virulent and vicious, while, on the other hand, we also see cases in which primary infection is extensive and virulent, with the later pathologic and clinical manifestations quite insignificant and practically *nil*. With such variability in the causative agent, it is but a natural sequence that there should be a corresponding variability in the results produced.

The second factor refers to the variations in the reactions of the constitution and nature of the individual to the causative agency. It yet remains to be determined to what we must attribute the individual's powers of resistance against injurious or deteriorating agencies. Many theories have been offered in the past, are being promulgated at present, and will be formulated in the future, as to how, where and when the various so-called protective bodies are determined and formed, and in what manner they exercise that function. Various apparently plausible explanations have been worked out as to why in the one case we find abundance and activity of these protective bodies, while in another case they are few in number and apparently inactive. Whether this problem will ever be definitely solved, time alone can tell. Life and its processes beyond a certain stage have ever been beyond the analytical grasp of scientific investigation. Science as yet has not been able to directly convert inorganic material into living protoplasm, or infuse into it the power of exercising those faculties and properties inherent to such living protoplasm.

A similar difficulty awaits us in attempting to explain why in the one case the meninges of the

brain appear to be the structure predominantly affected, at one time the dura, at another time the arachnopia, at one time the basal portion, at another the convexial, at still another the general. Also, why in a second case we find a localized gummatous formation; in a third, structural change in the larger arteries or veins; in a fourth, a diffuse involvement of all of the structures, meninges, blood-vessels, interstitial tissue and the neuronic elements, and in a fifth a degenerative change involving apparently primarily the neuronic elements themselves. Many other features of these cases could be alluded to, in which any attempt at explanation only leads us into the realm of imaginative theory in regard to the variations enumerated.

Variability in the make-up of the observer is another factor that comes into consideration, which is at once so evident as to call for no further discussion.

The reports of the following cases point out some of the symptoms and features which should always arouse suspicion of the possibility of a specific infection being the causative factor:

CASE 1.—Female; aged 40; negress. Gives a history of luetic infection fifteen years before the onset of the present trouble. Previous health, so far as could be ascertained, was good. Was taken rather suddenly with a severe right facial neuralgia, which responded promptly to potassium iodid administration. About two months later she was seized with dizziness, clonic spasms in both arms, becoming semiconscious and later unconscious, with weakness of right arm and leg. After a few days consciousness was regained, but there still occurred several attacks of clonic spasms in the right arm, dizziness, pain in the left side of the head and photophobia. No marked alterations in pulse, temperature or respiration. No disturbance of special sense. The condition completely disappeared under the administration of potassium iodid.

CASE 2.—Male; Arabian; aged 33. Complained of intense headache of several months' duration, with some digestive disturbance, but no vomiting. Later he was troubled with disturbances of vision, principally that of seeing double. He became stuporous, indifferent to his surroundings, apathetic, somnolent, the headache decreasing as the drowsiness increased. At the time of examination he was well nourished, his movements were sluggish and without energy. He was listless and apathetic, mentality was slow and somewhat confused. Facial expression flabby. The left internal rectus was paretic. There was some drooping of the upper eyelid, some apparent protrusion of the left eyeball, dilatation of the left pupil, both pupils non-reactive to light, reaction to accommodation doubtful. Vision in the right eye hazy and

indistinct; in the left eye could barely diminish light from darkness. The right disk showed considerable swelling, the left a well-marked neuritis. Disturbances of sensation or motion elsewhere could not be obtained, but he complained greatly of a constant feeling of fatigue and of being easily tired out on exertion. Knee-jerk was absent.

He gave a history that his wife, who had been previously married to an American, had contracted a bad private disease from her first husband, as a result of which she lost all her hair and was otherwise sick, and claimed to have contracted a similar condition from her.

After several weeks of antisyphtilic treatment the digestion improved, headache became less severe, stupor and somnolence decreased, mentality became quicker and clearer, and vision improved so that the sight of the right eye was fairly clear, while in the left eye he could only distinguish much difference by dropping the head and looking out of the upper part of the eye. About this time the patient decided to return to his native land, since which time nothing has been heard of the further progress of the case.

CASE 3.—Male; aged 42; engineer. Previous health was reported as good; could not elicit any history of syphilitic infection.

The present illness began several months before the time of examination, with a rather indefinite change in the manner and disposition noticed by his fellow-workmen. Upon returning home from work as usual one day, his wife noticed that he acted what appeared to her as rather silly and childish, and upon being asked what was wrong, replied, "Durned if I know." Upon attempting to eat seemed unable to masticate the food well and also to swallow it. He became emotional, excitable, irritable, disoriented and confused to the extent of necessitating his committal to the insane hospital. Examination showed him to be well nourished, of powerful physique, inattentive to and non-observant of his surroundings, facial expression flabby, being more marked on the right side; tongue, lips and hands were tremulous; speech thick, tremulous and drawling, leaving out syllables and words; saliva dribbled from the mouth, and there were frequent ineffectual attempts at spitting. Movements in general were incoordinate and ataxie, gait was waddling and apparently weak, the weakness becoming more marked on exercise, the feet dragging, due apparently to an inability to lift them; the knee-jerks were exaggerated greatly; Rhomberg's phenomenon was marked; ankle clonus was marked; Babinski's reaction prominent, all these more marked on the left side. Both optic disks were considerably reddened. In spite of antisyphtilic treatment, both dementia and paresis progressed rapidly. Finally, the organic musculature became involved and the case terminated fatally in about three months.

Autopsy disclosed a localized meningitis and gumma formation, irregular in outline, about 10 cm. in length by 5 cm. in breadth and nearly 1 cm. in thickness over the anterior, external part of the left frontal convolution, a similar mass over the inferior part of the right Rolandie area, and the third gummatous mass in the substance of the left optic thalamus.

CASE 4.—Female; aged 40. Previous health was reported good, and a history of specific infection could not be obtained. In August, 1906, upon arising from bed one morning, she was suddenly seized with what appeared to be a stroke of apoplexy, loss of consciousness, complete motor aphasia, paralysis of the whole right side, inability to close the right eye, tongue deviated to the right on protrusion. Sensation was at first decreased, but completely recovered in a short time. She regained some motion in the leg. The right arm became flexed, pronated and rigid. The facial paralysis almost wholly disappeared. The deep reflexes on the right side became greatly exaggerated. Babinski's reaction was marked on the right side.

After having so far recovered as to be able to move about the house unassisted, about two months later she was suddenly seized with convulsions, became unconscious and rapidly passed into coma and death.

Autopsy disclosed a well-marked syphilitic endarteritis, with thrombosis of the left middle cerebral artery and softening of the parts of the cerebrum supplied by the occluded vessel.

CASE 5.—Female; aged 53. Complained of intense headache, orbital, frontal and suboccipital, of soreness in the abdomen, mostly across the stomach and around the small of the back, of gas in the bowels and of constipation.

The patient said that she was not robust as a child, yet was never confined to bed. Began to menstruate at 14, and always suffered severe pain, usually requiring medicine to alleviate it. Was married at the age of 18, and shortly after suffered from a severe attack of so-called acute inflammation of the uterus, lasting several months. Had several attacks of malaria at different times during her earlier life. Had always suffered more or less from neuralgia and headaches. About five years ago she had several small hard ulcers in the vulva, which healed with difficulty.

Two years ago she began to suffer with the present pain in the head, for which she consulted different physicians, some attributing it to the kidneys, some to the nose and throat, some to the stomach and also to the eyes, receiving from each the corresponding treatment. About eight months ago she began to suffer from double vision, which lasted about three months, and also spells of dizziness and periods of somnolence. The patient was poorly nourished, of sallow complexion, inclined to be bald, and complained of tenderness over the right occipital region on percussion and

pressure. Special senses, speech, sensation and motion normal. Ophthalmoscope revealed well-marked choked disk in both eyes. There was moderate arteriosclerosis. Spleen was enlarged and floating. Sigmoid was tender. Intestines were distended with gas. Superficial reflexes were active. Knee-jerks active. A questionable left Babinski reaction. Urine contained some albumin, some pus cells. No casts, excess of oxalates.

About a week later there developed a rather acute complete left hemiplegia, followed by delirium and involuntary evacuation of the urine and feces. After a few days the mental state cleared up, and after some weeks the paralytic condition began to improve, and progressed so far as to have recovered almost complete use of the leg, but the arm is more or less spastic and in a state of contraction. The physical condition otherwise is better than it has been for years, and the whole condition seems to be improving under the iodid administration.

CASE 6.—Male; aged 31; clerk. Gives a history of periodical intemperance for some years until about eight years ago, soon after which he began to complain of loss of memory and dizzy spells, the latter being followed by an inclination to somnolence and sleepiness, but remained fully conscious of his condition and surroundings. After several months, mental disturbances developed necessitating his removal to the hospital for the insane.

Upon examination he was found to be well developed and well nourished, facial expression was listless and apathetic. He appeared to be more or less drowsy and stupid. Was slightly deaf in the left ear. Movements in general were inclined to be spastic and incoordinate. The tongue, lips and hands were tremulous. Speech was paraphasic, almost typical of general paresis. Gait was uncertain and incoordinate. Knee-jerks were greatly exaggerated, more so on the right side. Ankle clonus was more marked on the right side. Rhomberg's phenomenon marked. Babinski's reaction in the right foot.

A few days after examination he became profoundly somnolent. Right hemiplegia developed. The right external rectus became paralyzed, breathing stertorous, superficial reflexes abolished, swallowing difficult, and after a few days coma, convulsions and death.

Autopsy disclosed a syphilitic basal meningitis, a syphilitic endarteritis and thrombosis of the left middle cerebral artery.

CASE 7.—Male; aged 25; tool-maker. Complained of an inability to talk well, nervousness, tremor, being excitable and easily irritated and of inability to work. His previous health was good. At the age of 14 he contracted lues, for which he underwent treatment for about five years, during which he was several times mercurialized.

About nine months ago, while walking about the city one afternoon, he was suddenly seized with a feeling of faintness, some weakness in the left arm and some difficulty in speech, but was quite able to walk home and felt perfectly well otherwise. Upon the advice of the physician consulted in regard to the speech disturbance, he remained in bed several days, but apart from the speech disturbance, which was apparently paraphrasical, the report is that he felt well. After some weeks he became nervous, tremulous, irritable and excitable, easily incited to outbreaks of anger, and very difficult to get along with, at times manifesting some mental confusion. Occasionally, he suffered from a moderate headache. Improvement had progressed so far that he had arranged to resume work, when he was again seized with an attack of more marked speech disturbance and more or less mental excitement.

Examination at this time showed him to be only moderately nourished. Nervous, excitable, emotional, he showed marked tremor of the lips, face, tongue and hands. Speech was almost typically paretic. The tongue deviated to the left on protrusion and its movements were spastic. At times he was unable to recall words that he wished to use. Writing was tremulous and typically paretic. The tremulousness was increased by excitement or strained efforts to correct. The right knee-jerk was more increased than the left, both being greatly exaggerated. Some tendency to right ankle-clonus, no Rhomberg and no Babinski reaction. Blood-vessels markedly sclerotic. Urine contained some albumin and a few hyaline casts. Mentally there was a tendency to excitement, obstinacy, more or less confusion and uncertainty. About three months later, shortly after awakening one morning, he was seized with a severe tonic convulsion, lasting several minutes, which was followed by a semicomatose condition lasting about twelve hours. Following this he had repeated convulsive seizures involving the left side of the body, the face most, the arm less and the leg least. These gradually grew less severe, at times consisting only of a turning of the head and eyes to the left and some clonic contractions of the corresponding facial and ocular muscles. Consciousness was lost in all of them, but was to a great extent regained immediately after the seizures ceased, sometimes even before. There was almost complete paralysis of the left side, involving also the tongue. Sensation appeared to be somewhat decreased, although this may partly have been due to the dulled sensibility generally. The knee-jerks were greatly exaggerated. There was present a left Babinski reaction. He also manifested considerable delirium for several weeks. After this the mental condition revealed at times hallucinations of sight, hearing and occasionally general sensation, mild delusional ideas of threatened harm to himself and occasionally to his wife, the former at times leading him to

cover himself with the bed cloths, or trying to hide behind the screen. The paralysis gave way to a condition of paresis, and the movements in general were spastic and incoordinate to some degree. This is practically his condition at the time of writing, with his general physical condition otherwise fairly good. The condition is regarded as a syphilitic vascular disturbance, with thrombosis of the right middle cerebral, upon which was engrafted a probable right side hemorrhagic pachymeningitis. Several months later this case developed projectile vomiting, rigidity and retraction of the head. Somnolence, rise of temperature to 107 and 108 F., coma and death.

CASE 8.—Male; aged 37; tinner. Gives a history of gonorrhea at 18. Has never required any medicinal treatment otherwise.

The present illness began about one year ago by more or less mental disturbance associated with attacks of unconsciousness, but no convulsive seizures, followed by paralysis of the left side of the body, involving mostly the arm, passing off within a day or two.

His facial expression was apathetic and apparently confused, manifested considerable dementia, also tremor of his lips, tongue, hands and feet. Speech was slow, stumbling and tremulous. Writing was tremulous, being exaggerated by excitement or voluntary efforts to write to such a degree as to cause the left hand to shake vigorously during such efforts. Gait and general movements were incoordinate and inclined to be spastic. Superficial reflexes were decreased. The deep reflexes were increased and all more marked on the left side. The palpable blood-vessels were slightly sclerotic. Under antisyphilitic treatment recovery appeared to be complete.

CASE 9.—Male; aged 30; laborer. Gives history of syphilis ten years ago. Previous health otherwise good.

The present illness began with extreme nervousness and violent headaches. After some months, the length of time uncertain, he began to manifest some mental disturbances, becoming incoherent in his conversation, his manner and actions, developing delusions of impending harm, and subject to outbreaks of excitement and violence toward those about him. He gradually became more and more demented, childish and silly in his manner and actions, very emotional, irritable and excitable, acquired a feeling of general exaltation, both physical and mental. The headaches disappeared. There gradually developed bilateral paralysis of the external ocular muscles, fixation and inequality of the pupils, advanced optic atrophy, impaired vision, paresis of the facial muscles, pronounced paraphasic disturbances, exaggerated knee-jerks, some general tremor, incoordination and muscular weakness. After several weeks, general convulsions developed, followed by coma and death.

Autopsy disclosed a well-marked syphilitic basal meningitis and more or less general meningo-encephalitis.

CASE 10.—Male; aged 36; clerk; Jew. Was quite healthy as a child. Drank heavily from the age of 15 to 27, but has been practically a total abstainer since. Said to have contracted venereal disease about eleven years ago.

Was perfectly healthy until two years ago, when he began to manifest some irritability and to notice that the memory was not as reliable as formerly. About eight months ago he began to suffer from spells of numbness in the hands and some difficulty in speech, lasting about five minutes, recurring every two to three weeks, and occurring mostly on Sundays, beginning sometimes in one hand, sometimes in the other, and extending to the jaws and tongue, involving speech. Some months later the condition extended to the lower extremities, which also felt weak, and it was associated with some twitching sensation in the muscles affected. During the time he also suffered from attacks of dizziness, occasional headaches and more marked impairment of memory. The day previous to the examination he suffered from an attack of greater severity than ordinarily, and following which he became extremely nervous, restless, excitable, exalted, talkative and emotional.

The clinical picture was typical of general paresis in a hypomaniacal state. He became acutely maniacal, necessitating his removal to the hospital for the insane, where he died within two months in a condition of maniacal exhaustion.

His father died at 88, more or less demented, following an apoplectic seizure received twenty years before, resulting in complete hemiplegia and aphasia. Mother died at 69 of gastric carcinoma. One maternal uncle died of tuberculosis. Autopsy was not permitted.

In reviewing the clinical data of these 10 cases, it will be seen that they correspond in general to those usually given by the various authorities on this diseased condition.

The age varies between 25 and 53, one before 30, five between 30 and 40, three between 40 and 50, one after 50.

The interval between the time of inoculation and of the manifestation of the first symptoms varies from five to fifteen years. In four a history of infection was not obtainable, yet the positive findings at autopsy in three of the cases and the prompt and positive response to antisyphilitic treatment in the fourth, establish a positive diagnosis.

Three were females and seven were males.

The onset in two cases was sudden, in eight gradual. Of the former, one began with an apoplectiform insult, the other with aphasic disturbances and a general feeling of faintness and weak-

ness. In the former, consciousness was lost, in the latter it was retained. In those cases with a gradual onset, six manifested mental disturbances from the beginning, three motor disturbances and five sensory.

Mental disturbances were present in eight of the cases at some time during the course of the disease.

Loss of consciousness was present in seven cases; in one it was one of the earliest symptoms; in two it occurred at different times in the course of the disease; in four it was a terminal manifestation.

Headache was prominent in five cases, being an early symptom in three of the cases.

Dizziness was complained of in four cases; somnolence was evident in the same number.

Pupillary inequality was present in two cases, the Argyll-Robertson phenomenon in two, disk changes in four, visual disturbances in three, photophobia in one, and paralysis of external ocular muscles in two.

Facial neuralgia of the right side was the earliest and apparently the only early manifestation in one case.

Disturbance of speech was present in six cases, in one being of purely motor character, in the others more of a paraphasia. In one case it was the earliest and most prominent manifestation.

General muscular weakness was present in four cases, right hemiplegia in three, left hemiplegia also in three. In one the hemiplegia immediately followed the apoplectiform onset; in two it was an early manifestation, and in the other three it developed later in the course of the disease.

Tremors were present as a marked feature in five cases, incoordination in six, ataxia in two, and spasticity in one.

The superficial reflexes were increased in one case, decreased in two, and apparently normal in the others.

The deep reflexes were decreased in one case, apparently normal in two, increased in the other seven, and in the hemiplegic cases always most marked on that side.

Rhomberg's phenomenon was present in three cases. Babinski's in five. Convulsions were manifested in four cases, localized spasms in two. Sensory disturbances were present in four cases, digestive disturbances in the same number.

Of these ten cases, two apparently completely recovered under antisyphilitic treatment; three improved, and in one of these it is still progressing, while in another a third recurrence of acute manifestations developed; two died of thrombosis of the left middle cerebral artery, one of mul-

tiple gumma; one of meningo-encephalitis and basal meningitis, and one of maniacal exhaustion.

These cases, in a measure, pretty accurately indicate the different pathologic processes by which a syphilitic infection may involve the nervous structures, namely:

1. By meningeal involvement.
2. By gummatous formations.
3. By vascular changes in the larger vessels.
4. By diffuse changes, involving more or less all of the structures, a so-called meningo-encephalitis.
5. By degenerative changes primarily.

The first four conditions are usually regarded as so-called secondary or tertiary processes generally occurring anywhere from two to fifteen years after the primary inoculation, although cases are also reported in which symptoms of cerebral involvement were manifested while traces of the initial sore still existed (Kahler). Swartz, Wood and others report a number of cases occurring within two or three months after infection. Ogilvie, in tabulating the time of onset from statistics gathered by him, came to the conclusion that in at least 60 per cent. manifesting symptoms of intraeranial syphilis, it occurs within five years after infection.

The last condition differs from the others in the probable mode of development and course of the structural changes and of the clinical manifestations, and in its non-responsiveness to antisyphilitic treatment. It is generally regarded as the result of the action of a toxin, produced in the body, either directly by the specific organism itself, or indirectly by the reaction of the tissues induced by them. whieh, if not the direct cause, at least predisposes to it by its modification of the processes of metabolism in such a way as to lessen the power of resistance, and to favor the development of the characteristic changes. The latter supposition seems to be the more probable, from the fact that in a certain percentage of cases similar clinical manifestations and pathologic lesions are found in the absence of any history or other evidence of syphilitic infection, whieh are apparently induced by other agencies, and yet one can scarcely regard it as a mere coincidence that in so large a percentage of cases of general paresis, given at about 80 per cent., a definite history of syphilis seems assured, and in so many of these it is not at all uncommon to meet with cases in whieh there are at first definite and apparently positive indications of brain syphilis, and later develop the characteristic clinical picture of general paresis.

It is at times most difficult, one may safely say impossible, to differentiate between these two con-

ditions, especially those in which one or the other of the two last named pathologic conditions enumerated is probable. This fact has led to some difference of opinion among authorities in regard to the primary pathologic changes occurring in general paresis, some claiming that the primary change is a degenerative one beginning in the neurones, with the vascular and interstitial changes arising secondarily (Molt), while others regard it as primarily vascular in origin, with the degenerative changes arising secondarily, and still others that the meningitis or interstitial change is the primary one. But it has been determined that there exists no relative proportionality between the glia proliferation on the one hand, and the destruction of the neurones on the other. So also has it been found that not infrequently there exists a rather intense cortical disease with a relatively mild meningeal disturbance. Since all of the elements entering into the construction of the nervous system are more or less involved in all well-marked cases, sometimes the changes being predominant in the one element, sometimes in the other, it appears justifiable to assume that the fundamental pathologic anatomy is a diffuse change involving more or less all of the structures. Some authorities do not include general paresis under the clinical group of intracranial syphilis, even though recognizing the prominent causative relationship between the two. This close and intimate relationship certainly seems to offer considerable justification for including them under that classification.

The diagnosis of these conditions is at times relatively easy and evident, at other times most difficult. Since the positive determination and identification of the parasitic nature, and of the more or less specific serum reactions present in syphilitic individuals, the diagnosis can be made with almost absolute certainty. But the minutiae and details of the methods necessary to carry out these examinations render it so difficult, and require so much time that they are practically inapplicable except in well-equipped laboratories and by regular laboratory workers, hence the great majority of clinicians still have to rely upon the history, the clinical manifestations and the results of the treatment. Even though there is not any one sign or symptom that can be regarded as pathognomonic of a syphilitic condition, yet there are some general features of the clinical manifestations which should always arouse one's suspicion of such a basis. Some of the more prominent of these are:

1. Changeability and multiplicity of symptoms.
2. The onset of manifestations being sudden rather than acute, subacute rather than chronic.

3. The disease running a course more or less in stages showing:

4. A tendency to remissions and recurrences.
5. The accompanying pareses and paralyses being transitory and changeable, corresponding more or less closely to the pathologic-anatomic alterations at the basis.

6. The usually ready and prompt response to appropriate treatment outside of the vascular and degenerative conditions.

Lumbar puncture at times also furnishes valuable information, for, according to some French authors, an increase of leucocytes in the cerebrospinal fluid in the absence of a suppurative condition, is indicative of a syphilitic nature.

The specific serum-reaction of Wasserman, which requires the employment of an extract derived from syphilitic tissue in conjunction with the serum of some animal (rabbit) immunized to the blood of some other animal (sheep), is too complicated and difficult to be utilized except by regular laboratory investigators. Noguchi has reported successful results with a so-called butyric acid reaction, which, if it proves reliable, is much easier of application, so that it can be utilized in the busy life of the clinician.

Some other investigators have been experimenting with a solution of taurin along similar lines, and with this the writer has had some experience, but the number and results of such examinations are not of such a nature as to justify any report being made or conclusion drawn. With all these investigations there will doubtless eventually evolve some method of facilitating the establishment of an earlier, and in doubtful cases, a more positive diagnosis of a syphilitic basis in diseases of the nervous system, and so enable one to adopt the earlier and to carry out the better the necessary treatment, so long as there is evidence of the presence of any syphilitic infectiousness or toxicity in the tissues or fluids of the body.

It will be seen that the prognosis in this diseased condition is not a very bright one. This unfavorable outlook to some extent depends upon the particular pathologic lesion existing at the time. The meningitic and gummatous conditions apparently yield the most readily to treatment, the arterial and diffuse changes much less so, and the so-called degenerative changes least so, if at all.

The treatment in all cases must be actively and vigorously antisyphtilic, and whatever special method may be followed it must be based upon the peculiarities and susceptibilities of the individual patient, and upon the effects resulting from the method adopted. As a preliminary measure it is always essential in every case to ascertain the

exact condition of all excretory channels and to place them in the best of functioning order before instituting very active antisyphilitic measures; otherwise one must not be disappointed if results that should follow are not forthcoming. It is not at all uncommon to meet with cases who report having been subjected to prolonged administration of mercury and iodid, even to the point of salivation, or of iodism without any apparent benefit, more likely harm, and yet where proper precautions are taken to ensure good absorption and good elimination, they respond readily to such measures. It is impossible to lay down any hard and fast rules; observation and experience alone enable one to determine what will be best in each individual case.

335 Pythian Bldg.

DISCUSSION.

Dr. J. H. FORD, Indianapolis:—Papers of this kind are of interest to the general profession and I believe they should have been read before the general conference of the Society so that they get to the men to whom they will do the most good. The overlooking of syphilis by the general profession is lamentable. Not enough diagnoses are made. Men should be aroused to it. I take it as unfortunate that papers of this character with the amount of research involved should be read to so few people.

DR. MARSHALL, Kokomo:—I agree with Dr. Ford that syphilitic infection is largely overlooked. Keyes says that 10 per cent. or 15 per cent. of the population is syphilitic. I think that is a conservative estimate. The amount of suffering caused by late syphilitic manifestations is something appalling, and I always take time to impress upon patients this fact when they come to me for treatment for syphilis in its early stages. It may be a coincidence, but it seems to me that half of my patients in the past couple of weeks have been syphilitic, either early or late. I was called to see a patient ten days ago, living with her third husband, infected by her first probably. She has a beginning tabes, diplopia, tabetic gait, lancinating pains, a squamous eruption on the thighs and never has known she had syphilis until I told her so. That case is yielding very nicely to antisyphilitic treatment. I think the laity ought to know more about this and about the prevalence of it also. I was called to give a hypodermic yesterday morning to a man dying of syphilis and alcoholic poisoning combined. He had a tabetic wife waiting on him. She has locomotor ataxia, lancinating pains, and takes about 20 grains of morphin for it. I think that syphilis is a much more prevalent disease than a physician will have any idea unless he thinks back over his cases, and notes how many men who have reached the age of fifty or sixty and are down with some

other disease will show some evidence of syphilis. If you ask these patients how long they took treatment they will say five or six months. It is also a prevalent idea that five or six, or eight months at the springs will cure syphilis, and I think that following such reasoning is responsible for many of these nervous affections produced by syphilis. I always impress upon my patients the fact that they must continue treatment longer than a few months.

DR. F. F. HUTCHINS, Indianapolis:—The first point I would like to emphasize in regard to syphilis of the nervous system is the time that intervenes between the infection and the symptoms. Years ago when I was in the hospital it was a common thing to find cases coming in with years and years intervening between the infection and the manifestation. I started to make a tabulated statement and I have a list of 100 cases, varying all the way from five to forty years between the time of the infection and the time of manifestation. I have seen several cases in the last two or three days that will illustrate: One, a prominent man, the head of a trust company in Indianapolis, recognized everywhere as a man of ability. He is 42, and has been showing ocular symptoms and minor nervous symptoms for the last six months. He never had the initial lesion of syphilis, but history showed it in his father and grandfather. It was undoubtedly inherited syphilis, not developing until he was nearly 40 years of age. The other is a man infected when 17 years old. He told me Dr. Jamison treated him seven or eight weeks and he had no symptoms of any kind until an ocular palsy occurred three months ago, and that man was 39. These cases come long after, during which time the disease is quiescent. The second point is the treatment. Everything in the world depends on making a correct diagnosis. An early diagnosis is important. If the nerve cell itself is involved in paresis and tabes and other forms, the only thing you can do is to relieve the symptoms. If it is only in the axis cylinder processes, the dendrites, or from mechanical pressure, effusions and thickening, and things of that kind, it offers every opportunity in the world for treatment, but that treatment must be pushed along certain lines. In the first place it requires large quantities of the iodids. I have cases now that are taking up to a thousand grains of iodids each day, or its equivalent. Recently, in New York City, physicians are prescribing pure tincture of iodon, and they decide how much iodon a man must take each day. They give him a gallon or a gallon and a half of water, and place the iodon in it. In that way he gets the water, which is essential, and large doses of iodon, as well as mercury. It is not enough to get the medicine into the system; if you do not get it out of the system you will not accomplish much good. Get it in and eliminate by the skin, the kidneys and the lungs. You have got to keep the eliminating

functions open. Also the most important part of it is that the iodids stimulate tissue metabolism, and you must support the nervous organization. For these purposes we have phosphorus, iodin and mercury. The diet must be studied carefully. The essential thing is to use phosphorus, because you will find phosphorus in large quantities in the urine, after using iodin. The treatment gives astounding results, where there is no true degeneration. Scar tissue does not function, but if there is no true degeneration, antisyphilitic treatment gives good results.

DR. A. W. BRAYTON, Indianapolis:—I cannot tell how considerably I have enjoyed the papers and how well I am assured of the qualifications of one of the writers by his great series of autopsies which you are all familiar with if you read the transactions of the State Asylum at Indianapolis, where he made the most extensive and complete series of autopsies ever made in this state. The other paper speaks for itself. I wish to emphasize one or two points, and will speak first of the classification. The doctor spoke of the disease belonging to the infective granulomata, tuberculosis, leprosy, syphilis, actinomycosis, but this is one of the diseases that has a protozoan organism, the one described by Sehauddinn. We know there is nothing more important in medicine than a knowledge of the persistence of the protozoan in the host. We do not know when malaria is extinet. My son, who was to have discussed that subject to-day, was three years in Panama. The first month he was there he was put into a hospital where a man had died of malaria and the mosquitoes had not been killed. He and the two men with him have been fighting their malaria for three years, and last week he went to Arizona because he did not care to expose himself to the rigors of our winter until thoroughly over his malaria. When will he be over it? I do not know. When are we over syphilis? We are over it probably when the last organism has been destroyed from the body. May they not secrete themselves as the malarial organisms do in certain parts of the body and lie dormant? I would suggest the work of Calkins of Columbia, whose work on the subject of the protozoa as related to human and animal diseases, is one of the most valuable contributions to our year's books. The next point is as to the protective ointment. I have treated over sixty or seventy of the brethren of our society for lues accidentally contracted. Forty or fifty primary sores have been on the right hand. Three men of our senior class have been infected, all on their right hand, in one year, in one class. I am advocating to students, doctors, nurses and others the protective ointment. It has a deterrent effect on the organism, as is well known by experiments conducted in the Parisian clinies, and proved by Metchnikoff and Roux. It is an ointment of 60 parts of ealomel, 30 parts of anhydrous vaselin and 10 parts of lanolin, that may be rubbed upon

any area of the skin or mucous membrane with which the syphilitic organisms have come in contact within the hour, and it will almost certainly prevent them from entering the system. It is not known positively, but it is believed that pure culture of the spirocheta, if injected directly into the blood, will not produce syphilis. It takes from ten to twenty-five days with the organism on the skin to produce papules visible to the individual infected, and it must enter by these routes. And so sensitive is this organism that my cigar if infected with syphilis and laid down would not infect the janitor an hour afterward, and articles washed are free from this living organism. These are things proved by men who have submitted to infection, and also by the work of Neisser and Sehauddinn. But I recommend to each of you such an ointment where when you feel about a patient that may be infected, you may use it upon your fingers, or you may even go so far as to use such an ointment as a lubricating ointment, and dentists especially ought to use it. I am not speaking out of my hat, but out of experience. It will be introduced into the French navy. This ointment is believed to be more effective than blue ointment.

In the past year I used immediately on the diagnosis an injection into the buttocks of 15 minimis of a 10 per cent. solution of the salicylate of mercuray in albolene every seven to ten days. I do not expect to see them oftener than a week or ten days apart. It only takes 50 grains of quieksilver to treat a patient three years. It is made fun of in this country, but given in Europe. Our treatment is inefficient and uncomfortable and dirty by rubbing it into the skin.

DR. CHARLES F. NEU, Indianapolis:—It is true that treatment will have no effect on degenerated processes in the neurotic element, but appropriate treatment will prevent further progress of the condition. The prineipal object in presenting the report of cases was to bring before the profession the necessity of looking out for the condition, and the early administration of the proper remedies, because it is only by early and effeetive treatment that these lesions of the nervous system can be prevented.

TEAM WORK FROM STANDPOINT OF THE SECRETARY.*

J. C. WALLACE, M.D.
FT. WAYNE.

It has been said, and I believe is quite true, that a secretary can make or break a society. Therefore, a medical society should be very careful in the selection of a secretary.

* Read at the Meeting of the County Society Officers, at Terre Haute, Oct. 6, 1909.

He should be a member of the society, not too far advanced in years of practice, so that he may have time to attend to the affairs of the society. He should be a man on good terms with everybody in the society, and should seldom be required to get off the fence. He should be a man noted for his adherence to the principles of ethics.

He should be a man well known for his ability to keep his eyes and ears open and his mouth shut.

His code of ethics should be: "Do unto others as you would have them do unto you." By the way, this is a pretty good code for everybody.

Having been elected and performed his duties well, the secretary should not be changed in a year or two.

Having elected our manager and captain, the secretary, we must now get our team into shape.

Our societies are of course organized and working, but it falls upon the secretary to keep things in running shape.

The secretary should have matters so arranged that if at a certain time the man who is to make a certain play fails to do so, another man will be ready to fall into and fill the gap and make the play.

Since according to the by-laws any legally qualified physician residing and practicing in the county, who is of good moral and professional standing, and who does not support or practice, or claim to practice, an exclusive system of medicine, shall be eligible for membership, it is the duty of the secretary to endeavor in every way possible to get those entitled to membership to join the society.

Now, how is this to be accomplished?

It is rather a difficult proposition to get men to join any society when the same is young and has not made a record for itself. Therefore, we must endeavor to get what we have in good working order, so that the results may show. Now, a one-man society does not amount to much.

The secretary cannot possibly do all the work there is to be done in the society. He needs the assistance of each and every member of the society. The secretary should in every way possible make each member of the society feel that he is an important part of the society. Whenever possible each member of the society should be given something to do in the upbuilding and maintaining of the society, so that he will take pride in seeing the society prosper.

The county medical society should be so enticing that one would be only too willing to miss a dollar or two to attend the meetings. The county medical society is the most important of the medical societies. It is accessible to the whole pro-

fession. All can share in its advantages. It is a postgraduate school. County medical societies are good, bad or indifferent, as the members make them; therefore, as no one is desirous of belonging to a bad or indifferent society, we should all put our shoulder to the wheel and build up our county society.

Our county societies being right, there is no question concerning state and national organizations being right, for what makes the state and national organizations but material from county societies?

Now, how are we to get together and build up the county society?

No matter what petty jealousies exist between members of the society, when it comes to matters in which the society is concerned, the members should forget selfish interests and act for the best good of the society. In other words, the society should be a unit. The county medical society should move as a well-trained football team. A mass play should be worked hard and often against quackery.

Members of the society can materially assist the secretary and incidentally themselves. How? By attending meetings regularly, paying dues promptly, taking active part in meetings, serving faithfully on committees.

When a new practitioner comes into the county members of the society should feel it their duty to see that an invitation is extended to the new man to attend meetings and after a sufficient time has elapsed, if he is worthy, prevail upon him to join the society.

Matter of Program.—I am of the opinion that it is a good scheme to have the officers of the society as program committee, since they have opportunity of knowing the needs of the society. The members of the program committee, however, should each do his share of the work and not leave the heavy end of the load for the secretary, as is so often done.

When a member's name appears on the program for a certain date he should feel it his duty to fill said date and, if unable to do so, should arrange to have some one else to fill the date. At least he should notify the secretary in ample time that other arrangement may be made.

Crisp papers and discussions and reports of interesting cases, with specimens when possible, should be arranged for and encouraged. Tedium and profitless proceedings and discussions should be avoided as far as possible.

The Fort Wayne^{*} Medical Society at present is composed of 104 active members, two honorary and one non-resident members.

We meet every Tuesday evening, except during July and August. Meeting is called to order promptly at 8:30 p. m.

Average attendance last year was twenty-seven.

Clinical meetings are held twice a year at each of our three hospitals and at the I. S. F. M. Y.

We have occasional joint meetings with pharmacists, dentists, lawyers and ministers.

The younger members of the society are very active; this I believe to be due to schooling in the Fort Wayne Academy of Medicine, an organization of the younger members of the medical profession of Allen County that meets every other Thursday evening. Live papers and discussions are the rule. The principal aim of the society is to school the younger members of the society for discussion in the County Society.

What the Fort Wayne Academy of Medicine is doing for the younger medical men of Allen County the county societies will do for the state societies and the state societies for the national society. The Fort Wayne Medical Society, i. e., the Allen County Society, has a library started and a library association.

We also have what is known as an indigent fund, so that should any member of the society be so unfortunate as to need financial assistance, in case of sickness or old age, there is a fund for that purpose.

Social functions in the way of an occasional banquet bring out some members who do not attend regularly.

The society did arrange for a local firm of attorneys to arrange what was to be known as an unfair or delinquent list of those people in Allen County who did not pay their medical and surgical bills. Such a list was once compiled and published, but our last effort was not a success.

THE JOURNAL of the Indiana State Medical Association, I believe, is a very good thing. It brings to us once a month the things that are happening in our state every month.

That portion of THE JOURNAL which has to do with reports of county society meetings, there is no question, is of vast good to us all. We should all endeavor to keep this part of THE JOURNAL one of the most interesting by sending in full reports of society meetings.

It would be of material assistance to the regular secretary of the society if it were arranged that an official reporter for the society meetings be provided, for oftentimes the secretary is busy attending to other matters and misses some of the discussion. Sometimes when said discussion does not appear in columns of THE JOURNAL some little slighted feeling arises. This could be avoided if official reporters were provided.

It would also assist very much if those reporting interesting clinical cases would have said report in writing and hand same to the secretary when through reporting case.

Likewise those reading papers should prepare and furnish the secretary or reporter of the society with a synopsis of the paper.

The county medical society is the most important of all medical bodies; it produces harmony, promotes good fellowship, removes petty jealousies, has an elevating influence on its members and aids them in educational and scientific advancement.

Membership in the county society, carrying with it, as it does, membership in the state association and giving the privilege of joining the American Medical Association, should only be denied to those who are not legally qualified to practice and to those who can be proven guilty of unprofessional conduct.

The best way to promote harmony and good feeling among the medical profession in the county is to meet together occasionally for discussion of medical subjects and for social intercourse and thus get to know each other better. In this way many men have been brought to understand and to like each other, who previously have been kept apart for some trivial reason which was readily explained away. It is never wise to be unduly sensitive. Frequent meeting together in county medical societies will do very much to dissipate misunderstandings and to promote general professional harmony.

Medical men should come together for their own good, their social advancement, mental athletics, fraternalism, comparison of views, rigorous discussion, the recital of experiences and exhibition of their works.

Activity, interest and competition are what make the large county society or state organization a success. The man who expects to succeed does not fear competition.

Some men say they are too busy to attend a medical meeting. There are two classes of busy doctors. The one represented by a class of men who have made a name for themselves; men who stand at the top rung of the ladder and have reached it by doing hard work, good work in a scientific way and yet attend to a large practice. Such men carry on large practices, do a large amount of reading, write excellent articles and read papers before medical societies. The faithful attendant at his medical society is busy because his work counts.

The other fellow is too busy hustling around getting the little things, while the fellow attend-

ing his medical society meetings gets the big, ripe, juicy fruit that counts.

The medical man owes it to his patients to keep in touch with the methods and experiences of other practitioners in his line of practice.

The county medical society should endeavor to educate its members to the belief that the physician should be a leader in his community, in character, harmony, in dignified and manly bearing and in courteous and open treatment of his brother practitioner to the end that the profession may occupy that place in its own and the public's estimation to which it is entitled.

The evil of many medical societies is the "knocking" propensities of its members. Be a booster and you won't have to knock. Petty jealousies have no place and gain no rewards in medical societies.

There should be in the ranks of the profession a system of Free Masonry, whereby the differences and friction of the members might be kept a secret from the laity.

Finances.—The secretary should keep a record of the income and the outlay so that he will know exactly where the society stands financially at all times.

He should see that all dues are collected promptly; settle all bills cash; answer all communications promptly; keep record of attendance. Minutes should be complete and up to date. He should keep an accurate record of the society and all things pertaining thereto. The secretary should present to the society at the annual meeting a detailed report.

The secretary, in his place of trust, becomes aware of various cliques and hears numerous things for and against different members of the society. He should endeavor to be a peacemaker. Sometimes this is a pretty bad position to assume, but, then, if you can get a couple of brother practitioners to forget some little affair and make up it pays.

Results of Organization.—It would seem incredible that any physician could wish to do other than work in his own county society and do all in his power to make it an organization that would merit the respect of the community, so that when its members come together and express themselves in matters pertaining to the public good their opinions would be respected.

With all counties and states organized it would be a simple matter to keep in touch with all who are entitled to practice, whether members of the organization or not, by a system of registering. The idea of issuing transfer cards is a good thing.

The medical profession properly organized will wield a power in national, state and county

affairs worthy of the dignity of the profession, for physicians will have learned how to work effectively together. And no physician will be practicing medicine very near, if not over, the borderline of quackery, in his community, while still preserving some remnants of professional respectability for himself by membership in the county, state and national associations.

SKETCHES OF THE MEDICAL HISTORY OF INDIANA.

G. W. H. KEMPER, M.D.
MUNCIE, IND.

(Continued from page 462. Vol. II.)

ALPHABETICAL LIST OF DECEASED PHYSICIANS.

CADY, WILLIAM F.—Lafayette (1826-1883). S. T. 1884, 224. Dr. Cady was one of the early advocates of the free school system and one of the founders of the Tippecanoe County Medical Society. He filled several honorable positions as surgeon during the civil war.

CANADY, W. H.—Knightstown (1821-1873). S. T. 1873, 124.

CAREY, ISAAC.—Marion (1812-1909). Was a resident of Grant county for fifty-nine years.

CARR, GEORGE W.—Ligonier (1830-1895). S. T. 1895, 416.

CARSON, WILLIAM F.—Huntington (1851-1900). S. T. 1901, 481.

CASSELBERRY, ISAAC.—Evansville (1821-1873). Dr. Casselberry was a native of Posey county, Indiana. After graduating at the Ohio Medical College he located in Evansville. At the commencement of the Civil War he was appointed surgeon of the First Indiana Cavalry Regiment, and served in that capacity until the close of the war. From the time that Evansville was placed under sanitary regulations, until his death, Dr. Casselberry filled the office of the secretary of the Board of Health. In 1871 he was appointed professor of physical diagnosis in the Evansville Medical College. He contributed an article on "An Inquiry Into the Physiology of the Organic Nervous System," *Am. Jour. Med. Sciences*, 1852. "Causes of Fever," *Ib.* April, 1856. "Ancient Marriages of Consanguinity," *Ib.* 1859. Also a series of articles on "The Causes of Epidemics," *Nashville Med. and Surg. Jour.*, from November, 1857, to May, 1858. His writings are acknowledged to be valuable aids to medical knowledge. See *Trans. Ind. State Med. Soc.*, 1874, 179; *Ib.*, 1855, 52, "An Inquiry into the Physiology of the Organic Nervous System," and *Ib.*, 1872, 93, "The Mode in Which Electricity Acts on the Human Organism." Both of these articles contributed to the State Medical Society are practical papers.

CHAMBERLAIN, JAMES N.—Waterloo (1822-1896). S. T. 1896, 265.

CHAMBERLAIN, SAMUEL B.—Lawrenceburg (1825-1897). S. T., 1898, 389.

CHAMBERS, JOHN.—Indianapolis (1846-1892). Born in Belfast, Ireland, in 1846, and was educated at the Dublin University. Came to Indianapolis in 1873.

He was a teacher for fifteen years in the Indiana Medical College, filling the chairs of anatomy, principles and practice of medicine, and adjunct professor of diseases of women. See I. M. J., Vol. xi, p. 88.

CHANNING, WILLIAM S.—Pendleton (1851-1906). S. T. 1907, 489.

CHARLTON, SAMUEL H.—Seymour (1826-1897). S. T. 1897, 353. He was assistant surgeon of the Sixth Indiana Vols. in the Civil War. In 1882 was vice-president, and 1888 president, of the Indiana State Medical Society. In the State Transactions, 1887, 55, is an article from his pen, entitled "Is There a Typho-Malarial Fever?" Transactions, 1888, 5, another article, "President's Address, Relating to the Work of the Society. See Robson, p. 639. Stone (with portrait), p. 83.

CHENOWETH, JOHN T.—Winchester (1833-1903). S. T., 1903, 335.

CHENOWETH, NELSON T.—Windsor (1837-1909). Was a soldier of the Civil War, having served in one or two Ohio regiments. Member of Randolph County Medical Society.

CHENOWITH, GEORGE F.—Huntington (1849-1899). S. T. 1900, 319.

CHITWOOD, GEORGE R.—Connersville (1805-1893). S. T. 1893, 251. In 1831 he located at Scipio. In 1838 he removed to Liberty, and in 1840 was admitted to the bar, practicing both law and medicine. In 1840 he was elected associate judge of Union County Circuit Court, in which position he served seven years. In 1859 he was elected to the chair of general pathology in the Cincinnati College of Medicine and Surgery, and to the chair of obstetrics in 1861. He located at Connersville in 1847. I. M. J., Vol. xii, p. 32.

CHITWOOD, JOSHUA.—Connersville (1838-1903). S. T. 1903, 336.

CHURCHILL, JOHN M.—Indianapolis (1863-1893). S. T. 1894, 222.

CLAPP, ASAHEL.—New Albany (1792-1862). Born in Massachusetts Oct. 5, 1792, and died Oct. 29, 1862. Located in New Albany in 1817. Was present at the Medical Convention, June 6, 1849.—(Miss Lydia Townsend.)

CLAPP, WILLIAM A.—New Albany (son of above) (1822-1900). Was born in New Albany, Oct. 29, 1822, and died in same city Nov. 7, 1900. Was a graduate of the Jefferson Medical College (1848). Was surgeon of the Thirty-eighth Reg. Ind. Vols. Was a member of the Medical Convention, June 6, 1849.—(Miss Lydia Townsend.)

CLARK, DOUGAN.—Richmond (1828-1896). Dr. Clark was born in Randolph county, North Carolina, May 17, 1828. He graduated from Haverford College in 1852. Three years later he entered the medical department of the University of Maryland, and after removing to Indiana completed his medical studies at the University of Pennsylvania, where he received the degree of Doctor of Medicine in 1861. He lived at Carthage, Westfield and Indianapolis, in this state, and located at Richmond in 1866, and became professor of Greek and Latin at Earlham College. In 1869 he entered the ministry in the Friend's Church. His death occurred from pernicious anemia, Oct. 10, 1896.—Abridged from record by Dr. Edmond Clark, I. M. J., Vol. xv, p. 295.

To the State Transactions he contributed an article on "Female Doctors." 1867, 116, and a second on

"Aesthetics in Midwifery," 1871, 29. A charm was added to Dr. Clark's articles and discussions by his musical voice and clear delivery.

CLARK, J. C.—Corydon (1809-1895). I. M. J., Vol. xiv, 177.

CLARK, LEMON W.—Elkhart (1858-1896). S. T. 1896, 267.

CLARK, WILLIAM R. S.—Bluffton (1820-1882). S. T. 1883, 267.

COCHRAN, JAMES.—Spiceland (1824-1894). I. M. J., Vol. xii, 410.

COE, ISAAC.—Indianapolis (1782-1855). S. T. 1893, 18. Was born in Morris county, New Jersey, July, 1782. For a time he engaged in the manufacture of glass at Utica, N. Y., but soon afterward studied medicine, and came to Indianapolis in 1821. He first built a cabin near the bank of Fall Creek, which was known as "the house with glass windows." A few years later he built a commodious frame dwelling on the Circle, where he resided until 1853, and then moved to Galena, Ill., where he died in 1855. His remains were brought back and buried in Crown Hill Cemetery, by the side of his wife. He was one of the founders and from the first an Elder in the First Presbyterian Church, and the father of Sunday schools in Indianapolis. He exerted an influence for good in Indianapolis which will continue to the end of time.

I notice in Lockerbie, Assessment List of 1835 that Dr. Coe owned a number of lots in the town of Indianapolis. They were valued at \$2,720; personal, \$500; buildings, \$1,000, and his taxes amounted to \$11.80, which he promptly paid.

COLE, HENRY C.—Kokomo (1838-1881). S. T. 1882, 197.

COLE, WILLIAM A.—Attica (1828-1894). S. T. 1894, 228. Dr. Cole, at the age of 18, enlisted in the regular army, and served in Mexico under General Scott. In the Civil War he was surgeon of the Seventy-second Reg. Ind. Vols., and during the last year of the war was brigade surgeon of Wilder's Brigade of Mounted Infantry.

COLLINS, GEORGE M.—Tipton (1838-1896). S. T. 1897, 363. Dr. Collins served as assistant surgeon of the Seventeenth Reg. Ind. Vols. from December, 1864, to the close of the war.

COLLINS, WILLIAM A.—Madison (1842-1883). S. T. 1884, 208.

COLLUM, WILLIAM F.—Jeffersonville (1812-1866). He was an eminent surgeon, locating in Jeffersonville in 1838. Was mayor of that city from 1848 to 1855, and served in the city council several terms. Died in Jeffersonville, Sept. 19, 1866, from blood poisoning resulting from wound received in making post-mortem examination.—(Note from Drs. Peyton and Field, Jeffersonville.)

Dr. Collum was one of the founders of the State Medical Society in 1849.

COLVERT, WILLIAM.—Fountain county (1816-1883). S. T. 1883, 281.

COMINGOR, JOHN A.—Indianapolis (1829-1908). Dr. Comingor for many years was a practitioner in Indianapolis, and at one time professor of surgery in the Medical College of Indiana. For two years prior to his death he had retired from practice and made his home with his daughter in Davenport, Iowa, where his death occurred Jan. 8, 1908. Contributed article on "Excision of Bone," Trans. 1866, 72.

(To be continued)

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EDITORIALS

FOOD VALUE OF MEAT JUICES AND EXTRACTS.

It is hoped that every reader of this journal has taken the time to read in full the report of the Council on Pharmacy and Chemistry on the analysis of the various proprietary meat extracts and meat juices at present on the market.¹ While the major portion of the medical profession has for a long time recognized the fact that the food value of the various meat extracts is exceedingly small, yet it had a right to expect some nutritive effect from the meat juices. But unfortunately the light shed upon these products by the Council has revealed some strange things, for not only are some of them not meat juices at all, resembling instead diluted meat extracts whose nutritive value is practically *nil*, but also bold and extravagant statements contained in the accompanying circulars of the manufacturers have been shown to be absolutely without just foundation.

A distinct difference exists between meat juices and meat extracts, the word "juice" being applied to the fluid portion remaining in fresh meat after proper cooling and storing, and obtained by pressure usually at a low degree of heat. Heavy pressure of freshly chopped meat yields from 25 to 50 per cent. of thick reddish juice, the chief characteristics of which are a large proportion of coagulable proteids and a low content of meat bases. There should be at least 12 per cent. of nitrogen and of the nitrogenous bodies, not less than 35 per cent. of coagulable proteins nor more than 40 per cent. of meat bases. If the temperature is not kept low, the coagulable proteins are precipitated and lost and the product thus robbed of its most nutritive asset.

A number of samples of raw beef juice were prepared and compared both with one another and with some of the various proprietary extracts and juices, and the results are interesting. In the first place it was demonstrated that those containing the largest amount of coagulable proteins

were those natural products made without the use of any heat whatever. While the total nitrogen content of the trade products is greater than the meat juices proper, yet the relative amount of nitrogen as represented by the coagulable protein, the most nutritive part was far in excess in the natural products, the coagulable protein in Valentine's Meat Juice being practically *nil*, though its content of glycerin and extractive, nitrogenous matter in the form of amino bodies is high. With reference to the food value of the latter ingredient, it may be said that at the present time it remains unsettled, some claiming that, as these bodies appear in the urine practically unchanged, they must have little food value.

By a comparison of the calorific value of meat juices proper with the commercial products, except Bovinine, it is found that the genuine meat juices, those made direct from the meat as wanted, by pressure, far outstrip the commercial products.

Bovinine was found to be a mixture of alcohol (8 per cent.), glycerin, added sodium chlorid, and defibrinated blood in some form. Formerly its coagulable protein was admitted to be egg albumin, though they now claim that this ingredient is no longer used. So that this product is in no sense a meat juice. That many of the statements contained in the circular accompanying this preparation are false was definitely proven through animal experimentation by the Council.

Carnine, a French preparation imported into this country, consists of a small proportion of defibrinated blood dissolved in a mixture of syrup and glycerol, all agreeable flavors, it likewise not being a meat juice at all.

"Wyeth's Beef Juice" is also not a true beef juice, but instead a diluted meat extract with much inorganic matter added, is low in coagulable proteins and hence in nutritive value. The conclusions of the Council seem to cover the present status of the subject and follow: "Neither Bovinine nor Carnine is a meat juice, the former is anything but palatable, and the latter soon cloyes. 'Valentine's Meat Juice' and 'Wyeth's Beef Juice' are virtually diluted meat extracts which are known to possess little food value. A physician depending on any of the foregoing products to supply material nourishment, in case of serious illness, is deceiving himself, starving his patients, and may be lessening their chances for recovery. If a patient recovers while using these commodities, it is certainly not due to the food value contained in them."

An exposition such as the Council has here effected cannot but be of material benefit to those who care to heed. Many authorities on dietetics,

1. Journal of the A. M. A., Nov. 20, 1909, pp. 1754-1756.

pediatrics and internal medicine do not hesitate to recommend these products as food substitutes in selected cases. Would it not be far better for both the profession and their patients if these same authorities would encourage the use of those meat juices that, when properly made at home, are much more nutritious and decidedly less expensive for the patient?

POST-OPERATIVE PSYCHOSES.

Not infrequently a surgical operation reacts as an event in the life-history of an individual, which marks the turning point in the mental equilibrium of such patient. Fortunately in the majority of cases the reaction is a favorable one, and with returning health the patient's mental state likewise throws off a previous morbid condition and takes its place with the rest of the economy in its return to health and happiness. Occasionally, however, the result is not so favorable and what may have been a preoperative melancholia develops into an actual post-operative mania. Besides the clinical and prognostic importance attaching to such conditions, they are of decided interest to the surgeon from a forensic standpoint. So that the study of the condition presented by Howard A. Kelly to the American Gynecological Society at its last meeting merits consideration for both reasons. The contribution is made up of a review of the literature upon the subject, which unfortunately is all too scant, appended by a résumé of Kelly's own cases and his conclusions.

Deplorable though it is, yet the fact remains that the field is grossly neglected by both surgeons and alienists; by the former because of their lack of familiarity with even the confusing terms of this branch of medicine, by the latter possibly because they have not oftener been called upon by surgeons for direct aid in the management of such cases. A logical remedy for this defect would seem to present along either of two paths, viz.: either the surgeon should verse himself more thoroughly in psychic disease and therapy, or else he should summon the alienist immediately the condition presents. By such a régime a more careful study and report of each case would accrue, and our knowledge of the subject would be greatly augmented. It has been frequently said that probably no doctor realizes the extent to which he practices some form of psychotherapy in his daily work, usually all unconscious to himself it is true, but, since such is the case, why not have some systematic method of attack, some definite knowledge as to how

such emergencies can be and usually are successfully combated? That gynecologist would be soundly condemned who, upon opening a belly, encountered an unexpected complication that he was not prepared to care for, through lack of qualification; yet, if by reason of his aggression a patient develops a severe psychic lesion, does he not owe it to such patient at least to call to his aid one particularly skilled in such work, who will not only add to the therapeutic whole, but will contribute a larger part to the literature of the subject?

Although various factors are ascribed by different authors as the etiologic factors, such as infection, anesthesia, drugs, autointoxication, physical or mental exhaustion, shock, asthenia and lack of internal ovarian secretion, yet all agree that a hereditary predisposition or acquired susceptibility is usually present, some declaring that no normal person ever becomes unbalanced as the result of an operation.

In five cases observed after 106 gall-bladder operations Urbach classified all as acute hallucinatory confusional insanity, while Reynau maintains that the post-operative insanities conform to no one type. Although Kelly agrees in the main with Reynau, yet he is inclined to the view that most cases are of the type described by Urbach.

It would seem from the literature that men are affected as often as women, and the complication may occur at any age, although Kelly's experience is limited to adult women between the ages of 17 and 61, the most frequent decennium being between 35 and 45. Pisqué declares that the condition may follow any type of operation.

Kelly has excluded from his series all mild, transient, mental aberrations, limiting his cases to the true psychoses due to shock, worry or the effects of the anesthesia. Milder cases, such as change in disposition, irritability, depression, suspicion, etc., are common, but are not included.

That the severity of the operation has little to do with the complication would seem proven by the fact that in Kelly's series seven cases appeared after simple perineal repair, curettage, etc. And, while ether may be productive of some toxic effect in the brain, such as is evidenced in the kidneys by the usual appearance in the urine of casts and albumin immediately following operation, yet Selberg and Grekow have reported three cases following operation under local anesthesia. And, while a history of some mental instability is present in some cases, yet Kelly is convinced that the condition may develop in an otherwise perfectly healthy individual. The severe post-operative psychoses occurring as the result of the

psychic shock in predisposed persons is not unlike that due to great fires, earthquakes, accidents and terror in producing insanity. The predisposed state may ultimately show as mania, melancholia, paranoia, dementia, acute hallucinatory confusional insanity, etc., the last-named being the commonest type.

The symptoms usually begin between the second and tenth days and continue from two weeks to permanency. The prognosis as to recovery varies from 50 to 70 per cent.

To avoid this complication, the history should be carefully studied; what brings the patient, how much has he or she worried, etc. Secure the confidence of the patient, if possible, before the operation. The anesthetist should be tactful and careful.

Once the condition has developed, Kelly surrounds the patient with the best of hygiene, treats him expectantly for a week or ten days, after which time, in the absence of improvement, a competent alienist should be called in. Some hesitancy should be maintained about sending these patients to an asylum because of the possible forensic complications.

THERAPEUTIC VALUE OF DIGESTIVE FERMENTS.

Of all the various classes of remedies with which the profession is supplied, there is probably none to be compared in quantity with the galaxy of digestive mixtures thrust upon our desks. And, strangely enough, each and every one is credited with a distinct and individual value in the correction of the numerous disorders of digestion and nutrition that is peculiar to itself and no other. So that a clear statement of facts summarized from a wide clinical experience, such as was presented by Dr. Charles G. Stockton before the Section on Pharmacology and Therapeutics at the last meeting of the A. M. A., comes as a distinct relief to the busy practitioner who is almost daily asked to give of his time to a rehearsal of the exaggerated merits of some particular digestant mixture.

It seems almost superfluous to say that Dr. Stockton's enviable position in his specialty, diseases of the digestive organs, has, of course, been reached only as a result of his extensive observation and study in this particular line, but better or more accurate criteria for therapeutic accuracy do not exist than those based on wide and careful clinical study. Hence when, in speaking of the effect of preparations of pancreas on intestinal digestion, he declares that he has not been able to

satisfy himself that such process is improved by the administration of any ferments whatever, a reasonable doubt as to the therapeutic efficacy of such agents receives a new impetus.

He calls attention to several physiologic facts in connection with the process of digestion, and from them deduces the inconsistency of administering opposing ferments therapeutically. For instance, ptyalin, an important factor in starch digestion, is rendered inert after the stomach begins to secrete freely, and likewise the gastric ferments, acting only in an acid medium, are neutralized in the duodenum. True it is that ptyalin, some pancreatic and diastase preparations possess a certain reducing power over the starches at the time of ingestion of carbohydrates, but this ends with the admixture of the acid gastric secretion. So that it becomes a question whether whatever benefit is derived from the use of these remedies is not due to the bitter and aromatic substances with which the ferments are given.

Regarding the digestive powers of pepsin and hydrochloric acid on proteid, it is now pretty generally recognized that in order to obtain the best effect of pepsin in lowered secretion it must be combined with such relatively enormous doses of hydrochloric acid as to be resented by the patient. And even then the effect is slight; much less marked than that obtained by French observers who have administered to patients with lowered digestion the gastric juice removed from the stomach of dogs through a fistula.

As for the pancreatic preparations, the author feels that he has had even less evidence, either clinically or from the laboratory, that any benefit was derived from their administration. Indeed, he asserts that in the present chaotic state of our knowledge concerning the ultimate fate of the digestive ferments in the alimentary canal one should be reticent about expressing himself in favor of their use.

That the various elixirs containing pepsin, pancreatic, hydrochloric acid, lactic acid, vegetable diastase, etc., are not only unphysiologic but practically inert, has been definitely proved by the Council on Pharmacy and Chemistry of the A. M. A.

And yet, in the discussion of the paper, Dr. Hallberg declared that of 15,000 prescriptions filled in Philadelphia either pepsin or its essence was ordered 750 times, thus illustrating that tradition is as strong in medicine as in any calling. Did we pay more attention to a suitable diet and the discovery of the underlying cause, when there is one, for the impaired digestion, it is probable that, in the absence of an organic disease, a suit-

able amount of stomach rest, coupled with a judicious diet, would outshine in results all the drugging with digestant mixtures that we are asked to do.

EDITORIAL NOTES

THE dues for 1910 are payable now. Attend to the matter at once.

THE JOURNAL extends the compliments of the season to all its readers—A Merry Christmas and Happy New Year.

REMEMBER that membership in the State Association is forfeited if the dues for 1910 are not paid before February 1. The membership list of the Association is the mailing list of THE JOURNAL, as the dues of members include subscription to THE JOURNAL.

AT a recent meeting of the Committee on Arrangements for the St. Louis session of the A. M. A. a resolution was adopted declaring it to be the sense of the committee that, since St. Louis will be the host of the A. M. A. in 1910, resident members should not occupy places on the programs of the Sections.

THIS is the month when all county medical societies should hold annual meetings for the election of officers and payment of dues. The selection of a good secretary is absolutely essential to the success of the society, and the prompt payment of dues is necessary in order to maintain membership in the State Association and secure THE JOURNAL regularly.

AT the January meeting of the Indiana State Board of Medical Registration and Examination the matter of increasing the entrance requirements for the practice of medicine in this state will be considered. It is hoped that the Board will see the wisdom of keeping abreast of some of the more progressive states by raising the present requirements so that at least one year of collegiate work will be required of all those who matriculate in 1910, and that the requirement will apply on the licensure examination in 1914.

WE had supposed that the creosote treatment of pulmonary tuberculosis had been relegated to

the past, for the reason that creosote often proves irritating to the stomach when administered internally, thus lowering the resisting power of the patient, and for the further reason that many experienced and observing clinicians who have given the drug thorough trial in the treatment of pulmonary tuberculosis have found it inefficient and in many instances positively harmful. But now comes Beverly Robinson, of New York, who says (*Medical Record*, Nov. 20, 1909) that he has never found any treatment of pulmonary tuberculosis, either curative or preventive, that is superior to the use of creosote internally and by inhalation, properly used and insisted upon. He says that the treatment will cure many patients that would otherwise die.

This opinion should not seriously influence any physician who is curing his cases of pulmonary tuberculosis by absolute rest out of doors, judicious diet, and little or no medicine.

IT has been said that we have too many laws and not enough of them enforced. This may be true, but there are a few men in Indiana who think that a few more laws would not be out of place. One of these men had a five thousand dollar automobile destroyed by a chauffeur who, without permission, took the car out of the garage and succeeded in smashing it while on a "joy ride" with a party of convivial companions. In an endeavor to seek redress the owner of the car consulted several attorneys, who informed him that there is no Indiana statute under which the chauffeur could be punished or damages secured. The chauffeur could have been arrested for trespass and given the customary small fine, but that was not sufficient return for the trouble.

Another man discovered that his valuable automobile was being used occasionally during the night without his knowledge. Finally the wrecking of the automobile and injury of the driver disclosed the identity of the midnight intruder who had been profiting at the automobile owner's expense. In this instance the "joy rider" was not an employé or in any way identified with the automobile owner. Again, it was found that the Indiana laws do not provide proper punishment for such an offense and the "joy rider" was not even arrested.

In another instance an automobile was deliberately taken from in front of a business block where the owner had temporarily left it. The car was found many miles away, where it had been abandoned on account of failure of the gasoline supply, but presumably the driver was going to return for it, as he was discovered while attempt-

ing to procure gasoline. It is evident that the car was actually stolen and would have been sold like other stolen property, yet the lawyers assert that the offender could not be properly punished. A small fine for trespass is the best that the Indiana statutes provide for such an offense.

The law seems to protect these malefactors on the ground that they do not take the cars with the intention of stealing them. The mere fact that the cars, valued at several thousand dollars, are injured or even totally destroyed seems to be unworthy of consideration. The man who takes \$25 from his employer, even though he testifies that he only borrowed it, is convicted of stealing and goes to the penitentiary for from two to fourteen years, but the man who takes a \$5,000 automobile and destroys it, even though he testifies that he intended to return it, goes free. Surely the Indiana laws are not very broad in their provisions for protecting property rights.

Doctors are now using automobiles very generally, and they leave them out at all hours of the day or night. In view of the failure of the Indiana laws to protect against "borrowing" the car, it would be well to take the precaution to lock the car, through the ignition system or otherwise, so that no one can readily run off with the car.

CORRESPONDENCE

OFFICIAL NOTICE CONCERNING DUES. *To Secretaries of County Societies:*

Attention is called to the fact that the Indiana State Medical Association reports and dues should be sent in January 1, and become delinquent after February 1. It is hoped that the names will be arranged either alphabetically or preferably by towns or postoffice addresses, such grouping being an aid in making out lists. *But promptness should be the first consideration.*

Respectfully, F. C. HEATH,
Secretary Indiana State Medical Association.

DEATHS

DR. Z. C. DIXON, of Linton, died at his home, November 12, of congestion of the liver, aged 55 years.

DR. SAMUEL M. GOODE, the last surviving grandchild of Col. John Paul, the founder of Madison, died at his home in that city, November 2, aged 80 years.

DR. H. H. SETSER died at his home in Leavenworth, Ind., Nov. 11, 1909. Dr. Setser was a member of Crawford County, Indiana State, and American Medieal associations.

DR. ROBERT GRIFFIS died recently at his home in Muncie, following a stroke of paralysis, at the age of 82. Dr. Griffis was one of the pioneer physicians in Delaware County.

DR. GEORGE R. HAZLEWOOD, of English, Ind., died at his home Nov. 10, 1909. He was a member of the Crawford County Medical Society, the Indiana State, and American Medieal associations.

DR. EDEN E. RHODES, a graduate of the Medical College of Indiana, and a member of the Indiana State Medical Association, died at his home in Rochester, November 7, from pneumonia, aged 52.

DR. HARVEY MITCHELL, an active practitioner of Delaware County, died at his home in Muncie, after an extended illness, November 22. Dr. Mitchell was born in Greene County, Pennsylvania, in 1826. At the age of 17 he began the study of medicine, subsequently taking a full course in the medical college at Columbus, Ohio, graduating in 1850. He began the practice of medicine in Granville, Delaware County, in 1850, removing to Muncie in 1864. In 1893 he met with a painful accident resulting in the fracture of the bone in one of his lower limbs, the effect of which made him an invalid. Despite this, he retained all of his strong mental faculties unimpaired. Dr. Mitchell met with encouraging success in his profession, especially in a financial way, being at the time of his death one of the wealthy men of Muncie.

NEWS, NOTES AND COMMENTS

DR. B. A. THOMPSON has recently located in Kokomo.

DR. O. G. BRUBAKER, of Ogle County, Illinois, has located at Burlington.

DR. J. H. Ross, of Kokomo, is spending the winter in Winter Haven, Fla.

DR. F. H. FOSTER, formerly of Warsaw, has located in New Carlisle, Ind.

DR. GEORGE W. KIRBY, of Millersburg, sailed for Europe about November 17.

DR. CHARLES P. MELROY, Otisœo, accidentally shot himself in the thumb, October 31.

DR. LAUGHLIN O'NEAL, of Somerset, fell recently and sustained injuries of the head.

DR. AND MRS. J. GUARD FISK, of Indianapolis, are spending the winter at San Diego, Cal.

DR. G. H. BRODBECK, formerly of Roann, has recently moved to 550 N. Jefferson street, Huntington, Ind.

DR. JOHN D. NICHOLS, Indianapolis, has been elected supreme medical examiner of the Knights and Ladies of Honor.

DR. HENRY J. RIDPATH is now in the real estate business in Indianapolis, having abandoned the practice of medicine.

DR. FRANCIS W. JOHNSON, Utica, has recently undergone treatment in the Jeffersonville Hospital for disease of the throat.

DR. W. I. SCOTT has been appointed a member of the U. S. Pension Board at Kokomo, to succeed Dr. J. H. Ross, resigned.

DR. NELSON D. BRAYTON is located at Phoenix, Ariz., having resigned his position in the government service at Ameon Hospital, Panama.

THE Nurses' Commencement of Hope Hospital, Fort Wayne, was held at the First Methodist Church, Monday evening, November 22.

THE Kosciusko Hospital has been incorporated at Warsaw with a capital stock of \$25,000, with the object of constructing and operating a hospital.

HON. JOHN W. BOEHNE, Evansville, has given the Evansville Antituberculosis Society \$5,000 toward the establishment of a tent colony for tuberculosis near that city.

THE graduating exercises of the Lutheran Hospital Training School for Nurses, Fort Wayne,

were held at the Concordia College Auditorium Wednesday evening, November 24.

DR. J. L. PUCKETT, nominee on the Democratic ticket for mayor of Kokomo, was elected by a majority of over 700 in a city normally 600 Republican, which attests his personal popularity.

DR. T. C. KENNEDY, President of the Indiana State Medical Association, is moving from his home in Shelbyville to Indianapolis, where he will be located permanently after the first of the year.

THE Indianapolis Medical Society has instructed its secretary to prepare memorials on the deaths of Mrs. Albert E. Sterne, Mrs. George Edenharder and John Sowder, son of Dr. Charles Sowder.

DR. G. B. JACKSON, formerly of 708 Indiana Pythian Building, Indianapolis, removed his office to 309-10 Pennway Building, at the corner of Pennsylvania and New York Streets, Indianapolis, November 15.

DR. F. P. GILLASPY, of Indianapolis, was struck by a street car, November 6, as he was crossing the street near his home. He received numerous bruises about his head and body, and it is feared that he was injured internally.

DR. PAUL MARTIN, formerly superintendent of the City Hospital, Indianapolis, has been appointed a member of the City Board of Health to succeed Dr. Frank A. Morrison, who resigned to take a place on the board of education.

DR. JACOB FREDERICII MOYER was married to Miss Abbie Aileen Gibbs on Wednesday evening, November 3, in the First Congregational Church, Indianapolis, Ind. The at-home announcement is 3904 N. Delaware street after December 15.

DR. SAMUEL E. SMITH, Richmond, superintendent of the Eastern Indiana Hospital for the Insane, was elected president of the Associated Charities and Corrections of Indiana, at its eighteenth annual meeting in Columbus, October 26.

DR. A. A. NORRIS, of Elkhart, who recently presented a paper on "An Inquiry on Hospital

Finance" before the Elkhart County Medical Society, has been invited to present this paper before the directors of the new hospital association of Elkhart.

DR. ROSS MARTIN, a senior of the Indiana State University School of Medicine, and Miss Marie Wilson of Indianapolis, were married in Louisville, Ky., on October 29, and will be at home with Mr. and Mrs. C. E. Wilson, parents of the bride, in Indianapolis.

DR. J. N. HURTY, secretary of the state board of health, and Dr. Eugene Buehler, secretary of the board of health of Indianapolis, attended the meeting of the American Public Health Association in Richmond, Va. Dr. Buehler lead a discussion on the subject, "Pure Milk and Its Preparation."

IN the recent election in Indianapolis, Dr. John W. Sluss, Dr. Fred C. Health and Dr. Frank A. Morrison were candidates for the board of education. Dr. Morrison was the successful candidate. At this election not only did Indianapolis honor herself by placing a physician on the board of education, but also by electing Miss Mary Nicholson to the same board. This is the first woman ever elected to a position on the Indianapolis board of education.

DR. AND MRS. JOHN M. KITCHEN celebrated their fifty-sixth wedding anniversary in Indianapolis recently. Fifty-six years ago they were married in a small cottage which stood where the new Pennway building is now being erected on Pennsylvania and New York streets. They have lived on the location until the last few months. Dr. Kitchen is one of the two oldest physicians in Indianapolis. He came to Indianapolis in 1851 following the rush to California in 1849, in which he participated. During the Civil War Dr. Kitchen had charge of the United States Hospital, which occupied the site of the present Indianapolis City Hospital. He retired from practice in 1886.

THE Indiana State Nurses' Association, at their recent meeting, elected the following officers for the ensuing year: President, Miss Mary B. Sollers, Reid Memorial Hospital, Richmond; first vice-president, Miss Elva Mills, Dublin; second vice-president, Miss Lora Roser, Crawfordsville; secretary, Miss Mae D. Currie, Indian-

apolis; treasurer, Miss Anna Rein, Indianapolis. Standing Committees: Legislative, Mrs. Lillian Edgerly, Lafayette; by-laws, Miss Lizzie Cox, Elizabethtown; credentials, Mrs. Martha Elliot, Ft. Wayne; public health, Mrs. Charles J. Cook, Indianapolis; almshouse nursing, Mrs. Francis Teague, Marion; Red Cross, Miss Elizabeth Johnson, Indianapolis; arrangements, Miss Florence Martin, Indianapolis; nominating, Miss Anna Rein, Indianapolis.

SOCIETY PROCEEDINGS

HOWARD COUNTY.

The Howard County Medical Society met in regular session in Kokomo, October 1, with a good attendance.

Public Sanitation was the title of an excellent paper by Dr. W. I. Scott, in which he emphasized the importance of the public health laws, inspection of schools, public grounds, drainage, isolation of infectious diseases, etc. Dr. Scott is the county health officer, and in his discussion brought out many points of interest. Discussion.

Dr. O. G. Brubaker, of Burlington, and Dr. B. A. Thompson, of Kokomo, were admitted to membership. Adjourned.

WILL J. MARTIN, Sec.

MIAMI COUNTY.

The Miami County Medical Society met in regular session in Peru, November 26. Society called to order by President Ridenour, with eleven members present.

Arrangements were perfected to hold a guest and social session December 31.

Hydrotherapy was the title of a paper by Dr. H. E. Line, who said that hydrotherapy is the most ancient of all remedial agents for the treatment of disease, for the reason that water is a means not only usually found ready at hand but it adapts itself to almost every imaginable pathological condition in a remarkable manner. Hydrotherapy has been used by all the great physicians from the earliest time, and with such a degree of intelligence that two thousand years of experience has improved it but little.

Dr. Benjamin Rush is the father of hydrotherapy in America. Hydrotherapy has been rescued from the hands of empirics and charlatans and is now recognized by eminent medical men as one of the most potent of all remedies.

The physical effects of hydrotherapy are as follows: It reduces temperature, sustains life in the tissues; tissues being dependent upon the amount of water supplied them. The excessive drinking of ice water tends to digestive disorders and diarrhea. Applied externally it is stimulating or sedative, hemostatic, and an analgesic.

Discussion by Drs. J. O. Ward, E. H. Griswold and Jared Spooner.

Dr. John Spooner gave a very interesting and entertaining account of his trip abroad.

Adjourned.

P. B. CARTER, Secretary.

POSEY COUNTY.

The Posey County Medical Society was called to order in Mt. Vernon, October 26, by President Turman. Drs. J. P. Gibson and W. L. Miller were elected to membership in the society.

Headaches was the title of an address by Dr. Wm. H. Field, of Evansville, laying especial stress upon the differential diagnosis. Discussion.

Non-Surgical Treatment of Appendicitis was the title of a paper by Dr. C. Fullenwider, in which the author commended the Ochsner method, and the question of the initial purge was raised. In the discussion Dr. Turman recommended the early use of hyoscyamin, as he thinks it relaxes spasm, quiets peristalsis and relieves pain.

Typho-Malarial Fever was the title of a paper by Dr. W. M. Welch. The author reported several obscure cases which he preferred to call by this term. Discussion.

Adjourned.

C. L. RAWLINGS, See.

REPORT OF THE MEETING OF COUNTY SOCIETY OFFICERS AT TERRE HAUTE

Officers of county societies met on call of President Kahlo, of the Indiana State Medical Association, in the Knights of Pythias Building, Terre Haute, on the evening of October 6, to discuss ways and means of furthering organization. Dr. Kahlo being very busy in the House of Delegates, Dr. C. S. Bond, of Richmond, was appointed to preside over the meeting and Dr. Chas. Sudranski, of Greencastle, was appointed as secretary of the meeting.

The following counties were represented: Marion, Miami, Randolph, Vigo, Grant, Cass, Carroll, Davies, Green, Clay, Knox, Putnam and Allen.

The following papers were presented: "Team Work from Standpoint of Secretary," by J. C. Wallace, of Allen county; "The Secretary as Historian," by C. N. Combs, of Vigo county; "Unwritten Duties of Secretary," by R. H. Ritter, of Marion county. The three papers were discussed under one head. Various conditions in different counties were brought out in reference to the lack of attendance, interest in meetings, etc.

As the representation of the officers of the various county societies was so poor, a motion was made and carried that the papers presented be published in the Indiana State Medical Association Journal, so that those who were not present might gain benefits therefrom.

Adjourned. J. C. WALLACE, Reporter.

[Dr. Wallace's paper appears in this issue of THE JOURNAL.—ED.]

BOOK REVIEWS

DISORDERS OF METABOLISM AND NUTRITION. PART EIGHT. GOUT. By Professor H. Strauss; American edition by N. B. Foster, M.D., Associate in Biologic Chemistry, College of Physicians and Surgeons, Columbia University. Cloth. Pp. 70. Price, \$1.00. E. B. Treat & Co., New York.

This little monograph takes up the comprehensive subject of gout in a decidedly condensed form and treats of it under the general headings of its differ-

entiation, pathogenesis, the symptoms of uricacidemia, and the therapy of gout. For a short description of these phases of the subject it should prove of some value.

POCKET FORMULARY. By E. Quin Thornton, M.D., Assistant Professor of Materia Medica in the Jefferson Medical College, Philadelphia. Ninth edition, revised. Pp. 287. Flexible leather. Price, \$1.50. Lea & Febiger, Philadelphia and New York.

This valuable little manual has, in this edition, been thoroughly revised, and is planned with a view to being of the greatest convenience to the busy practitioner. Containing, as it does, prescriptions calling for only the official preparations, and those approved by the Council on Pharmacy, and giving uses for those time-tried remedies that have proven themselves to be of distinct therapeutic value, the work should find a ready place on every medical man's desk.

VISCERAL SURGERY. In abstract. Vol. 12. By Acheson Stewart, M.D., Junior Surgeon Mercy Hospital, Pittsburgh, Pa. Published by Medical Abstract Publishing Co., 219 Sixth street, Pittsburgh, Pa. Price, \$1.00.

ARTHROSTOEPEDIC SURGERY. (Extremities and Skeleton). Vol. 13. By Stewart L. McCurdy, A.M., M.D., author of "Orthopedic Surgery," "Oral Surgery," "Anatomy, in Abstract," "Emergencies, in Abstract;" Orthopedic Surgeon to Columbia and Presbyterian Hospitals; Professor of Anatomy and Oral Surgery, Pittsburg Dental College, Pittsburg, Pa. Published by Medical Abstract Publishing Company, 219 Sixth street, Pittsburg, Pa. Price, \$1.00.

The above small volumes are two of a series of fourteen abstracts of various medical subjects. These are intended not as substitutes for text-books, but for note books. They are especially convenient for preparation for state board examination. The books are in pocket size, leather bound.

FOOD POISONING. So-called Ptomaine Poisoning. By Prof. Dr. A. Diendonné, Munich. Translated and edited by Dr. Chas. Frederick Boldnan, Bacteriologist, Department of Health, New York City. Cloth, pp. 128. Price, \$1.00. E. B. Treat & Co., New York, 1909.

A rather remarkable amount of clinical data has been collected in this little work to prove that most cases of poisoning through foodstuffs, especially meat poisonings, are not caused by so-called ptomaines nearly so often as through certain specific bacteria or their toxins. The bacteriologic findings in many epidemics are described and it is highly probable that the author's conception of food poisoning is the correct one.

PRACTICAL DIETETICS WITH REFERENCE TO DIET IN DISEASE. By Alida Francis Pattee, graduate Department of Household Arts, State Normal School, Framingham, Mass., late Instructor in Dietetics, Bellevue Training School for Nurses, etc. Fifth edition. A. F. Pattee, publisher, Mt. Vernon, N. Y. Pp. 311. Cloth. Price, \$1.00.

This eminently practical little work, dedicated to the trained nurse, has suffered no changes in the text in this, the fifth edition. Many useful recipes and hints to the nurse are included, that must needs find a welcome place in the library of every working nurse. More detail for the modification of cow's milk would be a useful addition.

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